15c

The OIL WEEKLY

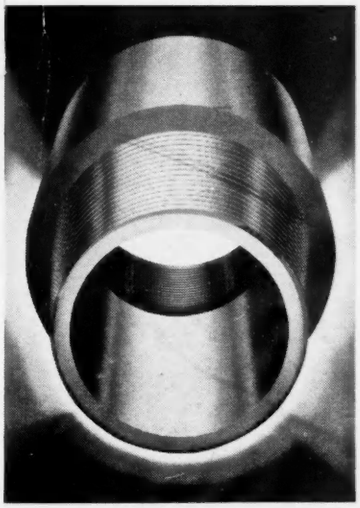
OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

THE WEEK'S NEWS INTERPRETED

REED ROTARY DRILLING TOOLS

SPEED • ECONOMY • DURABILITY



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THE World's Record

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VOLUME 80 FEBRUARY 3, 1936 NUMBER 8

NORVELL-WILDER

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BEAUMONT, HOUSTON AND FORT WORTH, TEXAS

SHREVEPORT AND LAKE CHARLES, LOUISIANA

WRITE FOR → CATALOG 36

NEW TULSA OFFICE . . . 1504 PHILTOWER BLDG.

THE PENALTY OF LEADERSHIP

In every field of human endeavor, he that is first must perpetually live in the white light of publicity. ¶ Whether the leadership be vested in a man or in a manufactured product, emulation and envy are ever at work. ¶ In art, in literature, in music, in industry, the reward and the punishment are always the same. ¶ The reward is widespread recognition; the punishment, fierce denial and detraction. ¶ When a man's work becomes a standard for the whole world, it also becomes a target for the shafts of the envious few. ¶ If his work be merely mediocre, he will be left severely alone—if he achieve a masterpiece, it will set a million tongues a-wagging. ¶ Jealousy does not protrude its forked tongue at the artist who produces a commonplace painting. ¶ Whatsoever you write, or paint, or play, or sing, or build, no one will strive to surpass or to slander you, unless your work be stamped with the seal of genius. ¶ Long, long after a great work or a good work has been done, those who are disappointed or envious continue to cry out that it cannot be done. ¶ Spiteful little voices in the domain of art were raised against our own Whistler as a mountebank, long after the big world had acclaimed him its greatest artistic genius. ¶ Multitudes flocked to Bayreuth to worship at the musical shrine of Wagner, while the little group of those whom he had dethroned and displaced argued angrily that he was no musician at all. ¶ The little world continued to protest that Fulton could never build a steamboat, while the big world flocked to the river banks to see his boat steam by. ¶ The leader is assailed because he is a leader, and the effort to equal him is merely added proof of that leadership. ¶ Failing to equal or to excel, the follower seeks to depreciate and to destroy—but only confirms once more the superiority of that which he strives to supplant. ¶ There is nothing new in this. ¶ It is as old as the world and as old as the human passions—envy, fear, greed, ambition, and the desire to surpass. ¶ And it all avails nothing. If the leader truly leads, he remains—the leader. ¶ Master-poet, master-painter, master-workman, each in his turn is assailed, and each holds his laurels through the ages. ¶ That which is good or great makes itself known, no matter how loud the clamor of denial. ¶ That which deserves to live—lives.

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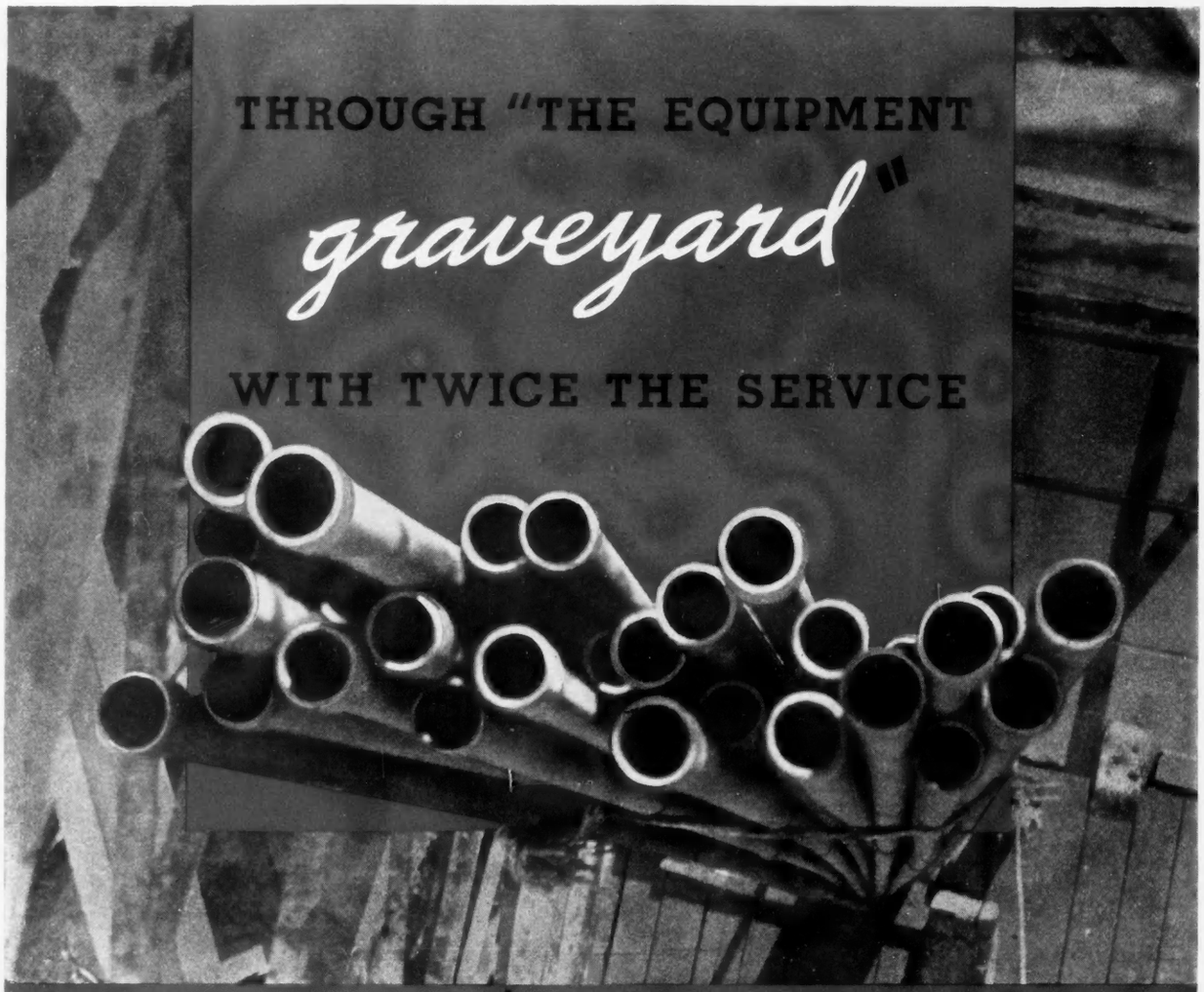

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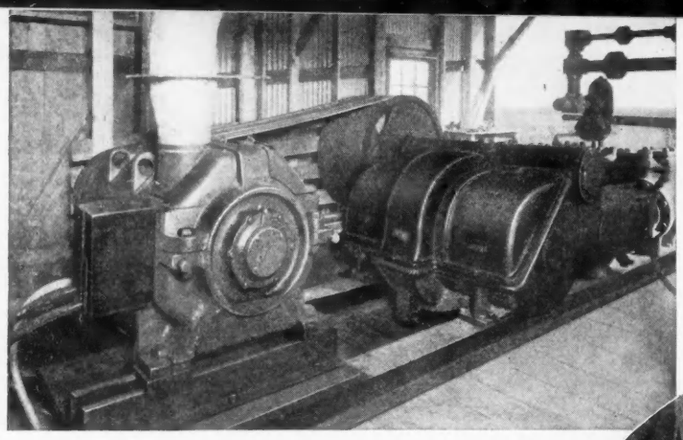

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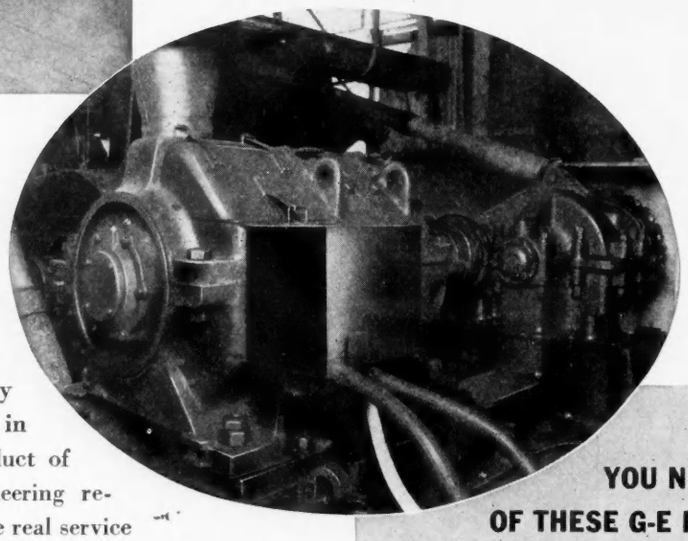

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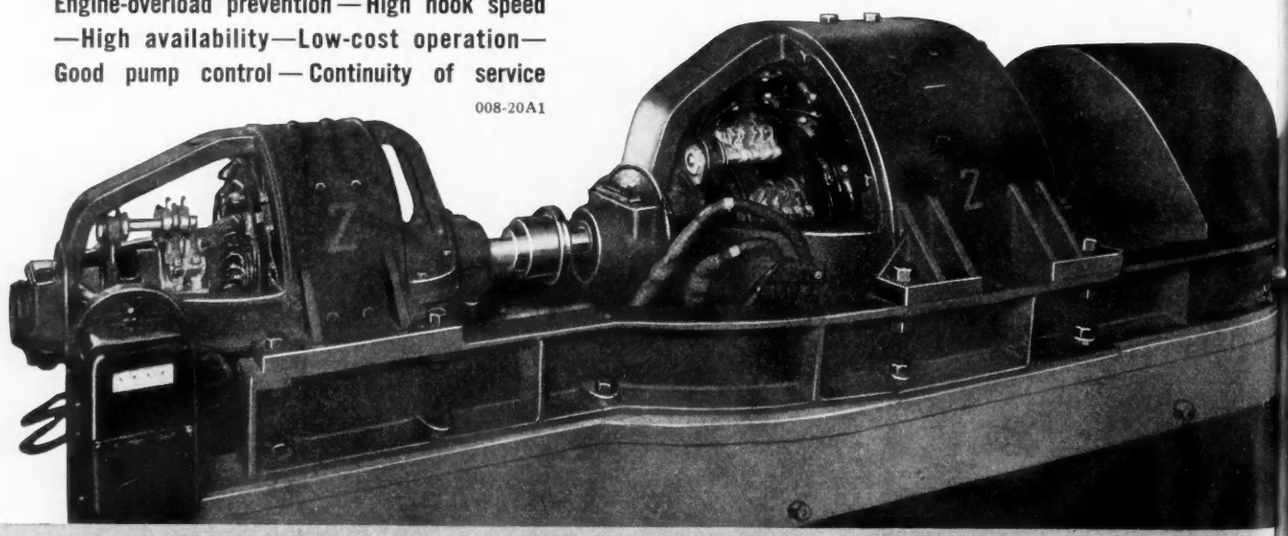

GENERAL ELECTRIC

FEB -5 1936

THE OIL WEEKLY

FOR OIL AND GAS PRODUCERS
AND PIPE LINE MEN

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ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor.

. . . this Week

JANUARY operations of the oil industry were not as favorable from a statistical standpoint as in preceding months, although they continued fairly satisfactory. Marring the general picture, was the California situation, which grows more serious. Outstanding development of the month was the general crude oil price increase east of California. During January, production was too high and above ground stocks of crude were increased for the first month in nearly a year. However, California was really the only offending area and if the new movement there works out satisfactory, the industry should show remarkable progress in coming months. **Page 10.**

HEADWAY was made last week in California on the new movement to curtail production. Producers in several fields agreed to reduce their output and accept raised crude prices as a reward. It will be recalled that a week ago Standard Oil Company of California held out higher prices as a bait to curtail production. It is now planned to have the lower output become effective February 10, if plans can be worked out. **Page 8.**

IMPETUS was given to plans for a survey of the amount of oil stored in the United States when funds for the project were included in an appropriation bill of the Department of Interior. However, it was stated that the additional money allotted the Bureau of Mines was not sufficient to allow it to continue to make regular monthly forecasts on demand and also complete the study of crude in storage. **Page 9**

PETROLEUM administration activities of the federal government in enforcing the Connally contraband oil law are to be contracted. Less funds will be available for the work, necessitating cutting investigational activities to the bone. All offices, except Chicago and East Texas, will be closed as a result. **Page 9**

AN important aid in the control of all factors that govern efficient operating results in flowing wells is chokes, which when properly applied accomplish many desirable results. Since each well is different, it is impossible to predetermine a critical rate of flow; however, experiments permit those accustomed to chokes and their application to quickly achieve best efficiencies. **Page 28.**

The Oil Man's Calendar

FEBRUARY

13 — *American Petroleum Institute, Directors, regular quarterly meeting, New York.*

17-21 — *American Institute of Mining and Metallurgical Engineers, New York.*

20-21 — *American Petroleum Institute, Mid-Continent Spring District Meeting, Wichita, Kansas.*

MARCH

19-21 — *American Association of Petroleum Geologists, Tulsa, Oklahoma.*

19-21 — *Society of Petroleum Geophysicists, Tulsa Hotel, Tulsa, Oklahoma.*

APRIL

9-10 — *American Petroleum Institute, Division of Production, Southwestern District, Shreveport, Louisiana.*

11-13 — *Petroleum Industry Electrical Association, Tulsa, Oklahoma.*

13-17 — *American Chemical Society, Petroleum Division, Kansas City, Missouri.*

16-18 — *National Petroleum Association, Cleveland, Ohio.*

20-25 — *Oil Equipment & Engineering Exposition, Houston, Texas.*

MAY

13-15 — *American Petroleum Institute, Mid-Year Meeting, Tulsa, Oklahoma.*

13-15 — *Natural Gasoline Association of America, Tulsa, Oklahoma.*

16-23 — *International Petroleum Exposition and Congress, Tulsa, Oklahoma.*

21 — *Independent Petroleum Association, Tulsa, Oklahoma.*

22 — *National Stripper Well Association, Tulsa, Oklahoma.*

JUNE

18-19 — *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

NOVEMBER

9-12 — *American Petroleum Institute, 17th Annual Meeting, Chicago, Illinois.*

AERIAL photography has been found useful by the oil and gas industries in the solution of vital operating problems because of its speed and economy. Is particularly applicable in geological and geophysical work, pipe line route surveying and ownership mapping. Photographs record details not obtainable by other methods. **Page 19**

AN entirely unitized boiler feed hook-up is being used in the Gulf Coast, which has the additional advantage of including a water heater. All pieces of equipment are mounted on two large six-inch drill pipe skids. By merely unbolting five one-bolt unions it is possible to transport the entire unit to another location without further dismantling. One of the skids is welded and closed at both ends and is used as the water heater. **Page 33.**

SINCE many of the Wilcox sand wells in the Oklahoma City field have been placed on artificial lifting units, paraffin problems have become quite serious. A large number of producers in the field are using solvents to prevent the accumulation of paraffin in their wells, and to remove it when it does begin to form. A few differences occur in the methods of applying, but essentially all are the same, and include rocking the wells several times by means of gas lift. Some very large volumes have been removed by this means. **Page 24.**

IF THE Amelia prospect produces, as appears likely from developments last week, Beaumont will get its third injection of an oil boom. This city was the site of the famous old Spindletop field back in 1901, which started the industry on its way to fame and fortune by yielding unusually large wells. Spindletop was later proved productive in deeper depths and caused another boom for the town that had by then become a city. Now Beaumont is likely to again feel the hustle and bustle of another field on its very outskirts.

Headway Is Made

CALIFORNIA PRODUCERS MAY AGREE TO CURTAIL OUTPUT

LOS ANGELES.

THE new movement to curtail crude oil production in California to 537,000 barrels day against a daily average production of 671,692 barrels a day in December, gained much headway the past week and the field quotas to reach the lower figure are scheduled to be effective February 10. The delay was decided upon to give field committees sufficient time to meet with the various producers, in an effort to compose differences that cropped up during the previous field meetings.

Several Fields Agree

The effort to reduce production to 537,000 barrels a day is based on an official announcement of Standard Oil Company of California, backed by approval of other major purchasing companies, that crude oil prices will be increased when and if daily production is reduced to 537,000 barrels. Such a reduction would mean that demand would approximately equal the supply, removing the necessity of building new storage.

During the various field producer meetings throughout the state, 14 fields reported a willingness to curtail 22 percent, two fields offered to cut 20 percent, six fields wanted to reduce seven percent, others wanted to reduce five percent, and two fields made no report. Practically all producers felt they would be justified in reducing production in keeping with the new increased price to be received; but certain heavy oil producers who will receive only five cents a barrel increase did not feel they should be required to reduce their production 22 percent.

The Central Committee finally decided to reduce all fields according to promised higher prices, from a percentage basis. When field quotas were worked out along this line, it was found that the state daily production would be reduced to only 557,713 barrels. Then to further reduce the state to a daily average of 537,00 barrels, a further flat reduction of 3.7 percent for all fields would be necessary. New field quotas were fixed in this manner.

Under the new set-up, Kettleman Hills would have to reduce to 77,025 barrels from an average of 105,310 barrels in December, with a weighted average new price of $1.35 a barrel, compared to an old weighted average price of $1.05. Long Beach must reduce to 63,410 barrels from a December average

[*Continued on Page 43*]

ADJUST EAST TEXAS

Better wells are to be benefited by change

AUSTIN.

THE Texas Railroad Commission issued a corrective order Friday fixing the allowable for wells in the East Texas field at 2.85 percent of the hourly potential. The order became effective on February 1.

Commission Chairman Thompson stated that the order was issued to prevent the possibility of court attack on the general order issued January 20, which provided that the factor would be "a certain percent, on the basis of an outlet of 432,264 barrels daily."

The calculations were completed from the well potentials as indicated by the new potential map of the field which was adopted by the commission at the last statewide proration hearing.

Under the new order the allowable for the best wells in the field is increased to 28.5 barrels per day. It was substituted for the factor of 2.7 percent which was in effect in January under which the best wells were allowed to produce 27 barrels daily. The effect of the order is to distribute among the better wells a larger share of the total field allowable than they have received heretofore. This means that a larger group of wells, principally along the boundaries of the field, will be included in the marginal class to be allocated 20 barrels daily.

OKLAHOMA UNCHANGED

February allowable will be practically the same

OKLAHOMA CITY.

THE attempt of operators in the Fitts pool of southeastern Pontotoc County to induce the corporation commission to reduce February allowable for the Wilcox sand zone of the Oklahoma City pool from 21.5 to 10 percent and to increase the Fitts allowable to 50,000 barrels per day failed to reach the bitter stage anticipated after several operators in the latter area had expressed dissatisfaction with the allocation of the past several months to those two sources of supply. The hearing to determine February market demand was convened on Friday afternon, January 24, after operators had failed to reach an agreement in an informal meeting with the oil and gas conservation department during the morning. Even though carried over through Saturday morning the hearing had not resulted in an agreement and a continuance until Wednesday, January 29, was granted. Commissioner J. C. Walton had announced an intention of trying to prevail upon the commission to disregard the recommendation of the United States Bureau of Mines and grant an increase of 50,000 barrels per day.

After a short conference on Wednesday morning, January 29, chief conservation officer W. J. Armstrong recommended that the February allowable for the Wilcox sand at Oklahoma City be left unchanged from the January figure of 107,543 barrels but that percentages be changed to take care of new wells principally in the north extension. He further recommended that the Fitts allowable be increased to 34,000 barrels per day, a boost of 2500 barrels per day. These and other recommendations brought no formal protest and it was believed the order would be prepared without the inclusion of any material changes.

GULF REORGANIZES

All subsidiaries are to operate as divisions

HOUSTON.

COMMENCING February 1, the producing, refining and marketing operations of the Gulf Companies will be conducted in the Mid-Continent and Gulf Coast districts directly by Gulf Oil Corporation of Pennsylvania as an operating company. The pipe line operations will be conducted by Gulf Refining Company, a Delaware Corporation. These changes result in a reorganization that will simplify the internal structure of the Gulf organization and give fewer operating units.

In Texas, Louisiana and Arkansas territories, Gulf Refining Company, Gulf Production Company and Gulf Pipe Line Company will be discontinued. In Oklahoma, Kansas and New Mexico, Gypsy Oil Company and Gulf Pipe Line Company of Oklahoma will be discontinued.

There will be no change in the personnel of the Gulf units, but company units that have heretofore been operating as separate companies will be operated as divisions. The reorganization will have no influence on the amount of capital or bonds or the financial structure of Gulf Oil Corporation.

PLAN STOCK SURVEY

Funds provided for study of oil held in storage

WASHINGTON, D. C.

PLANS of the oil state authorities for a field survey of the amount of oil stored in the United States were given impetus January 27 by inclusion in the appropriation bill for the Interior Department of an increase in the fund for oil and gas investigations by the Bureau of Mines to initiate the study.

The Bureau is given $250,366, an increase of $12,500 over the current appropriation, the additional funds, together with money from regular appropriations which can be used, being for the purpose of making the survey.

Discussions of the departmental appropriations before the House appropriations committee, however, developed that a supplemental appropriation will be required if the Bureau of Mines is to continue its monthly forecasts of demand.

These forecasts, declared by producing state officials to be of great value, have in the past been made with funds

secured from the Petroleum Administration, but the expiration April 1 of the industrial recovery act will cut off that financial support. Members of the appropriation committee, to which an appeal for funds was made, took the stand that it will be necessary for the department to secure the approval of the Budget Bureau to the work and submit a supplemental estimate of appropriation later.

Survey Is Desirable

The desirability of making the inventory of stored oil and continuing the preparation of market-demand statistics was laid before the committee during its hearings by Thomas Anglin of Holdenville, Oklahoma, representing the Interstate Oil Compact Commission, and Russell Brown of the Independent Petroleum Association.

"For some years the Bureau of Mines has been issuing estimates of the market demand for the nation and then down to each state," Anglin explained. "We think that is very material. While it does not control, while no state has to pay any attention to it at all, it helps; it is the best available evidence of market demand, and the states have been complying with it—those who are members of the Interstate Oil Compact. Our state and Kansas, for instance, comply with it 100 percent every month when our commissions meet to fix the allowable for the state.

"The Interstate Oil Compact is based solely on the matter of conservation and prevention of physical waste, but we know of no way we can determine the national market demand which would not be biased except by this method—we would want more for our state, or Texas would want more for their state; New Mexico, Kansas, Colorado and Illinois the same way. But with an independent Federal agency and we think, as far as we are concerned, free from politics, just issuing the market demand estimates as they see it and as it is figured, we think that it is for the benefit of the producer and the royalty owner and of the consuming public of the nation."

Approximately $15,000 will be required for the work, the committee was told. The Petroleum Administrative Board allowed the bureau $14,800 for the making of estimates, but will not be able to continue its contributions and it will therefore be necessary for Congress to make a specific grant if the surveys are to be continued.

The proposed survey of stored oil, the Oklahoma official predicted, may show that there is 25,000,000 to 50,000,000 barrels less oil from which gasoline can be economically produced than is now believed. Some of the oil has been in tanks for many years and has lost its gas content, he asserted. A determination of actual stocks will be valuble, not only to the states and the industry, but to the country itself, Anglin declared.

Production - requirement estimates make possible efficiency and economy in production, it was pointed out by Brown, and serve to prevent the necessity for excessive storage, which he characterized as a "shameful waste".

"I represent a great number of producers and we are all insisting that they do not permit us to bring out of the ground a lot of oil to be put into storage and go to waste," he said.

CURTAIL ACTIVITIES

Federal administration to be less active

WASHINGTON, D. C.

CONTRACTION of the activities of the Petroleum Administration to enforcement of the Connally contraband oil law, involving the closing of all field offices except those in Chicago and East Texas, has already been initiated by Secretary of the Interior Ickes in view of the imminent expiration of the extended National Industrial Recovery Act, under which the board is operating.

Plans of the administration for continuation of its work were discussed by officials with members of the House appropriations committee recently, during consideration of the Interior Department appropriation bill for the fiscal year beginning July 1, next. The bill, reported to the House of Representatives January 27, carries $300,000 for enforcement of the Connally act.

Curtailment of the administration's appropriation, which for the current year was $500,000, will necessitate cutting the investigational activities to the bone, it was declared by B. W. McLaughlin, assistant director of investigations.

Only Two Offices Open

Investigations of the illegal movement of oil have been extended into all states, but to meet the 1937 limitations the offices at Los Angeles, Jackson, Miss.; Boston, Oklahoma City and New York will be closed, motor-boat operations will be restricted and other activities will be reduced. It is planned to continue the Chicago office to deal with oil illegally transported up the Mississippi River by barge.

"We feel that our activities have reduced the movement of hot oil very materially," McLaughlin told the committee, submitting data showing that 91 cases and reports have been made under the Connally act, with 12 civil and 47 cases filed in court. Between October 15 and November 30, 1935, alone, the report showed, 74 cases were investigated, 35 of which were recommended for prosecution.

Revenues from the taxes on production and runs to stills have already exceeded all sums which have been spent on regulation of the industry, both through the former code and the Connally act, it was disclosed. Expenses of the oil administration from its creation in 1933 to November 30, 1935, totaled $2,358,000, while revenues from the taxes imposed in 1934 amounted to $2,483,000 to the same date.

Questioning of department officials with respect to the Connally act indicated a belief on the part of several members of the committee that the legislation was for the sole benefit of Texas. It appeared difficult for members of the department to convince this group on the committee that the Federal Government was not attempting to do something which otherwise the state authorities should do, in view of the fact that all efforts of the department appeared to be centered in one field.

The sentiment of these members was voiced by Representative Taylor of Colorado when he said "it is a Texas proposition, and Uncle Sam holds the bag, doesn't he?"

MUST GIVE REASON

Court orders commission be specific with tenders

AUSTIN.

THE Third Court of Civil Appeals has handed down an opinion holding that in refusing tenders, the Railroad Commission must give a sufficient reason for such refusal and must go further than to say "not produced and stored in accordance with regulations."

Applies to Fugitive Oil

This applies especially to fugitive oil which is picked up in traps or ditches.

In the case of J. M. Davenport versus the Railroad Commission the court pointed out that:

"Plaintiff alleged the oil was pickup oil; that it was impossible for him to show the source of the oil; that he filed an affidavit showing to the best of his ability the source of his oil; that the commission failed and refused to consider the affidavit but arbitrarily rejected his application. The first relief prayed for was that the court overrule the arbitrary action of the commission and enjoin its agents from interfering with the sale and transportation of the oil.

"The plaintiff's petition shows that it was brought to review the action of the tender board under the provisions of the law requiring the tender board, where a tender is rejected, to endorse thereon all the reasons for such rejection. But for this provision the order of the commission entered without stating the reasons therefor would be presumed to have been based on valid grounds. The obvious purpose of the act, however, was to properly advise an applicant the exact basis or grounds of the commission's order, thus enabling the applicant to meet the requirements or afford him specific grounds for a review in an appeal to the court. We have already held that failure or refusal of the commission to give its reasons constituted an arbitrary action. Insofar as the reasons stated by the commission, that the oil in question was not produced and stored in accordance with the rules and regulations of the commission, it does not, in our opinion, meet the requirements of the law.

"But the order of rejection recites that the application did not show the source or apparent source of such oil. Such requirement by the commission is not unreasonable. But the appellant alleged that he had furnished the board by affidavit all the proof on this question which it was possible for him to make. By the very nature of the oil and the method of its capture. It is manifest that there may be instances where it would be impossible to trace such waste oil to its probable source. Neither the law or the rules of the commission require the impossible. They should receive a reasonable application. If appellant were legally engaged in operating such pickup station, gathering oil with whose production he had nothing to do, his property should not be in effect confiscated by exacting from him unreasonable or impossible information as to its source."

January Results

RECORD FOR MONTH IS MARRED BY EXCESSIVE PRODUCTION

By L. J. LOGAN, Associate Editor

THE oil industry's operations were not as favorable in January, 1936, as in preceding months, from a statistical viewpoint; although the January results were nevertheless fairly satisfactory for the industry as a whole. Marring the general picture, however, was the continued unsatisfactory situation in California, where over-production of crude was rapidly filling storage and causing increasingly shaky markets for both crude and refined oils.

Throughout the country, except in California, there were advances of prices of crude oil and gasoline and other products around January 10. But those increases represented the reward for the favorable statistical position previously achieved by the industry. During January there was no further improvement of that position. In fact, there was probably some loss of ground. It is indicated, for instance, that crude production was too high, resulting in some addition to the above ground stocks of oils. During 1935, in contrast, the stocks were being steadily reduced.

Stocks Increase

Despite a stepping up of refinery operations and a substantial building up of inventories of gasoline during January, the supply of crude proved excessive above the refinery requirements, and the excess crude was run to storage, causing an increase in the nation's crude stocks. This was the first month since last April that the crude stocks were on the increase, and the increase came in the face of a greater than normal building up of gasoline stocks.

Crude Storage Greater

Crude oil stocks on January 18 were about 1,000,000 barrels greater than on December 28, according to the weekly reports of the Bureau of Mines, embracing 98 percent of the nation's stocks, exclusive of those of producers. The January 18 total was 298,136,000 barrels, compared with 297,051,000 barrels on hand December 28. In December the similar weekly reports indicated that crude stocks were reduced about 2,000,000 barrels, while previous declines included about 1,500,000 barrels for November and nearly 4,000,000 barrels for October.

The January interruption of the previous downward trend of crude storage occurred despite a substantial cutting of the Texas allowable for the month. The difficulty lay in the facts that California continued to produce materially above economic levels, while Louisiana also continued to show an important excess, as its output proceeded on an upward trend.

The situation in California grew increasingly acute during January. It was pointed out that the state's storage facilities rapidly were being filled, and that a continuation of the prevailing rate of production would result within several weeks in a situation in which storage would be full and the crude price structure quite likely would collapse. Already the gasoline market, wholesale and retail, was greatly depressed, and that fact within itself was having a bad effect on the California crude oil market. In view of these alarming circumstances, special efforts were being put forth late in January with the object of bringing about a substantial reduction of California's crude production. In connection with those efforts, the producers were being spurred on by the promise of a major purchaser that crude prices would be raised in compensation if the state's output can be adequately reduced.

Crude Production Excessive

The seriousness of the California overproduction situation is shown by the fact that in January this one state alone accounted for nearly two thirds of the large excess of crude production for the nation, above the amount recommended by the Bureau of Mines.

For the whole United States, this excess in January averaged 253,779 barrels daily, the actual production having averaged 2,812,979 barrels per day. Of that excess, California accounted for 161,442 barrels per day, or about 64 percent of the national over-supply. Louisiana was the second greatest offender, with an excess of 44,805 barrels daily, or about 14 percent of the national excess. Texas

Excesses of Average Daily Crude Production Above Bureau of Mines Recommendations

STATE	JANUARY, 1936			DECEMBER, 1935		
	Production	Demand	Excess	Production	Demand	Excess
California	679,242	517,800	161,442	678,284	513,800	164,484
Louisiana	177,405	132,600	44,805	165,479	128,000	37,479
Texas	1,040,266	1,017,200	23,066	1,064,585	1,005,800	58,785
Other States	916,066	891,600	24,466	918,502	892,600	25,902
United States	2,812,979	2,559,200	253,779	2,826,850	2,540,200	286,650

Motor Fuel Stocks

(American Petroleum Institute figures, as shown in weekly reports)

DATE	Motor Fuel Stocks, Bbls.
December 30, 1933	51,580,000
January 27, 1934	50,229,000
February 24	55,976,000
March 24	57,879,000

After March 24, 1934, figures shown represent stocks of finished gasoline, to be marketed as motor fuel, including natural gasoline which has been blended, and gasoline made from refinery still gases.

March 24, 1934	57,011,000
March 31	57,098,000
April 28	56,011,000
May 26	54,493,000
June 30	51,405,000
July 28	48,597,000
August 25	46,120,000
September 29	43,850,000
October 27	41,993,000
November 17	*39,892,000
December 1	40,831,000
December 29	43,969,000
January 26, 1935	47,888,000
February 23	54,399,000
March 2	55,654,000
March 16	†57,406,000
March 30	56,388,000
April 27	55,097,000
June 1	53,180,000
June 29	50,007,000
July 27	48,157,000
August 31	43,787,000
September 28	42,976,000
October 26	41,163,000
November 9	*40,780,000
November 30	43,190,000
December 28	46,472,000
January 25, 1936	50,368,000

*Low point of year.
†High point of year.

Crude Oil Stocks

Bureau of Mines figures as compiled monthly, comprising all crude in storage in the United States.

At End of:	Total Bbls. In Storage
November, 1933	355,614,000
December	355,394,000
	*354,305,000
January, 1934	353,642,000
February	531,641,000
March	354,067,000
April	354,350,000
May	355,883,000
June	357,239,000
July	355,260,000
August	350,838,000
September	348,937,000
October	346,415,000
November	341,165,000
December	337,254,000
January, 1935	338,174,000
February	337,319,000
March	339,139,000
April	339,793,000
May	338,559,000
June	334,757,000
July	329,351,000
August	324,966,000
September	320,705,000
October	317,155,000
November	315,558,000

Trend of stocks situation since end of November, figures being from weekly reports to Federal government, embracing 98 percent of total stocks, excluding those of producers.

November 30	299,222,000
December 28	297,051,000
January 18, 1936	298,136,000

*On revised basis, 1,089,000 barrels having been transferred from crude to fuel oil in California.

THE LONGEST-WEARING BELT EVER BUILT

PROOF—here pictured is a Goodyear COMPASS "400" High Tensile Oil Well Belt that is still giving perfect service after 20 months' continuous operation on an Oklahoma "water" well. Two other types of belts have been used on this drive. One failed in 3 months; the second in nine! More than two times longer service than the best—that's typical COMPASS performance on countless belt-killing drives!

REASON—the Goodyear COMPASS Belt is the modern version of the time-proved rope drive. Within a tough protective rubberized fabric envelope, the load is carried by a layer of heavy rope-cord spiralled continuously without a splice—the weak joint in other belts! A patented Goodyear construction, it is the only truly endless belt—and the most nearly stretchless. The G.T.M.—Goodyear Technical Man—will gladly consult with your engineers in selecting the proper type COMPASS for your hardest drives. Just write Goodyear, Akron, Ohio, or Los Angeles, California—or the nearest Goodyear Mechanical Rubber Goods Distributor.

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PACKING
MADE BY THE MAKERS OF GOODYEAR TIRES

THE GREATEST NAME IN RUBBER
GOODYEAR

United States Production

(Based on American Petroleum Institute estimates, which do not include oil which may have been surreptitiously produced.)

MONTH	Daily Average (Barrels)	Federal Estimate of Demand
January, 1934	2,233,505	2,183,000
February	2,239,070	2,183,000
March	2,339,950	2,282,800
April	2,420,950	2,366,200
May	2,575,380	2,366,200
June	2,588,100	2,528,300
July	2,560,550	2,530,300
August	2,475,300	2,449,300
September	2,431,950	2,341,700
October	2,364,150	2,325,800
November	2,375,400	2,340,300
December	2,414,600	[1]2,307,000 [2]2,460,300
January, 1935	2,500,850	2,460,300
February	2,521,250	2,526,100
March	2,568,800	2,520,300
April	2,559,750	2,527,300
May	2,601,350	2,561,200
June	2,695,100	2,651,000
July	2,707,150	2,660,000
August	2,676,250	2,600,600
September	2,737,750	2,613,000
October	2,780,850	2,554,200
November	2,825,900	2,563,700
December	2,826,850	2,540,200
January, 1936	[3]2,812,979	2,559,200

[1]December 1-16.
[2]December 17-31.
[3]Preliminary, subject to revision.

showed an excess of 23,066 barrels daily, or about nine percent of the national over-supply. Outside of California, Louisiana, and Texas, all areas combined had an excess of 24,466 barrels daily, or less than 10 percent of the national over-production.

For the country as a whole, there was less excess production, above the Bureau of Mines recommendation, in January than in December, the over-supply having declined to 253,779 barrels daily from 286,650 barrels daily in December. This reduction was largely brought about by a sharp curtailment of output in Texas, where the excess declined to the 23,066 barrels daily of January from 58,785 barrels in December. California's excess was about 3000 barrels per day smaller in January than in December, although the state accounted for a greater percentage of the national excess in January than in December. States outside Texas, California, and Louisiana showed better balancing of supply with demand, the excess of 24,466 barrels daily for January having compared with 25,902 barrels in December. Louisiana, in contrast with all other areas, showed more excess in January than December, the over-production increasing to 44,805 barrels daily from 37,479 barrels in December.

An accompanying table shows the excesses of actual production above the Bureau of Mines recommendations in January and December, for the various states.

Monthly Summary of United States Drilling and Production, January, 1936

STATE OR DISTRICT	*Completions	Oil Wells	Gas Wells	Failures	Initial Prod., Bbls. Daily	†Total Bbls. Oil Prod.
Oklahoma	204	131	15	58	241,689	15,209,250
Kansas	89	65	6	18	81,256	4,347,200
Texas	779	580	27	172	1,059,900	32,248,250
Louisiana	47	27	5	15	90,347	5,499,550
Arkansas	5	2	...	3	1,750	930,700
Southeastern States	....	...	...	...	.....	.....
Eastern States	171	38	78	55	294	3,216,750
Michigan	68	34	10	24	8,214	1,265,250
Wyoming	4	2	2	...	784	1,100,750
Montana	10	9	...	1	769	396,250
Colorado	....	...	...	...	.....	124,450
New Mexico	22	18	2	2	28,212	1,806,450
California	67	54	3	10	24,980	21,057,500
Total	1,466	960	148	358	1,538,195	87,202,350

*January completions shown represent not the calendar month, but the four weeks, or 28 days, ended January 25.
† Preliminary, subject to revision.

Production Above Year Ago

The United States crude oil production in January, totaling 87,202,350 barrels, was 12.5 percent greater than the 77,529,811 barrels produced in January, 1935. That increase was greater than justified by the increase in demand. For in recent months the total demand has been running around six percent higher than a year previously.

The greatest gains in production for January, 1936, over January, 1935, from a percentage standpoint, were those of four states, Louisiana, California, Michigan, and New Mexico, in the order named, each having shown a materially greater increase than the national gain. The January, 1936, production was greater than that of January, 1935, by 61 percent for Louisiana; by 36 percent for California; by 26 percent for Michigan; and by 22 percent for New Mexico.

Similar increases in production for other states included nine percent for Colorado, eight percent for Montana, five percent for Wyoming, three percent for Texas, two percent for Oklahoma, three-quarter percent for the Eastern States, and one half percent for Kansas. Arkansas was the only state to show a decrease, registering a six percent decline.

As is customary for the time of year, gasoline stocks increased during January, in preparation for expected greater demand in the spring. This increase was about the same amount as in January, 1935, aggregating about 4,000,000 barrels. The total stocks of finished gasoline on hand January 25 amounted to 50,368,000 barrels, according to the American Petroleum Institute, as compared with 46,472,000 barrels held December 28.

At 50,368,000 barrels, the finished gasoline stocks were about 2,500,000 barrels greater than one year previously, but almost the same as two years previously. Tending to justify a somewhat larger amount of gasoline in storage this January as compared with a year ago is the currently larger demand. In 1935 the do-

United States Drilling and Production in January, 1936, and 1935

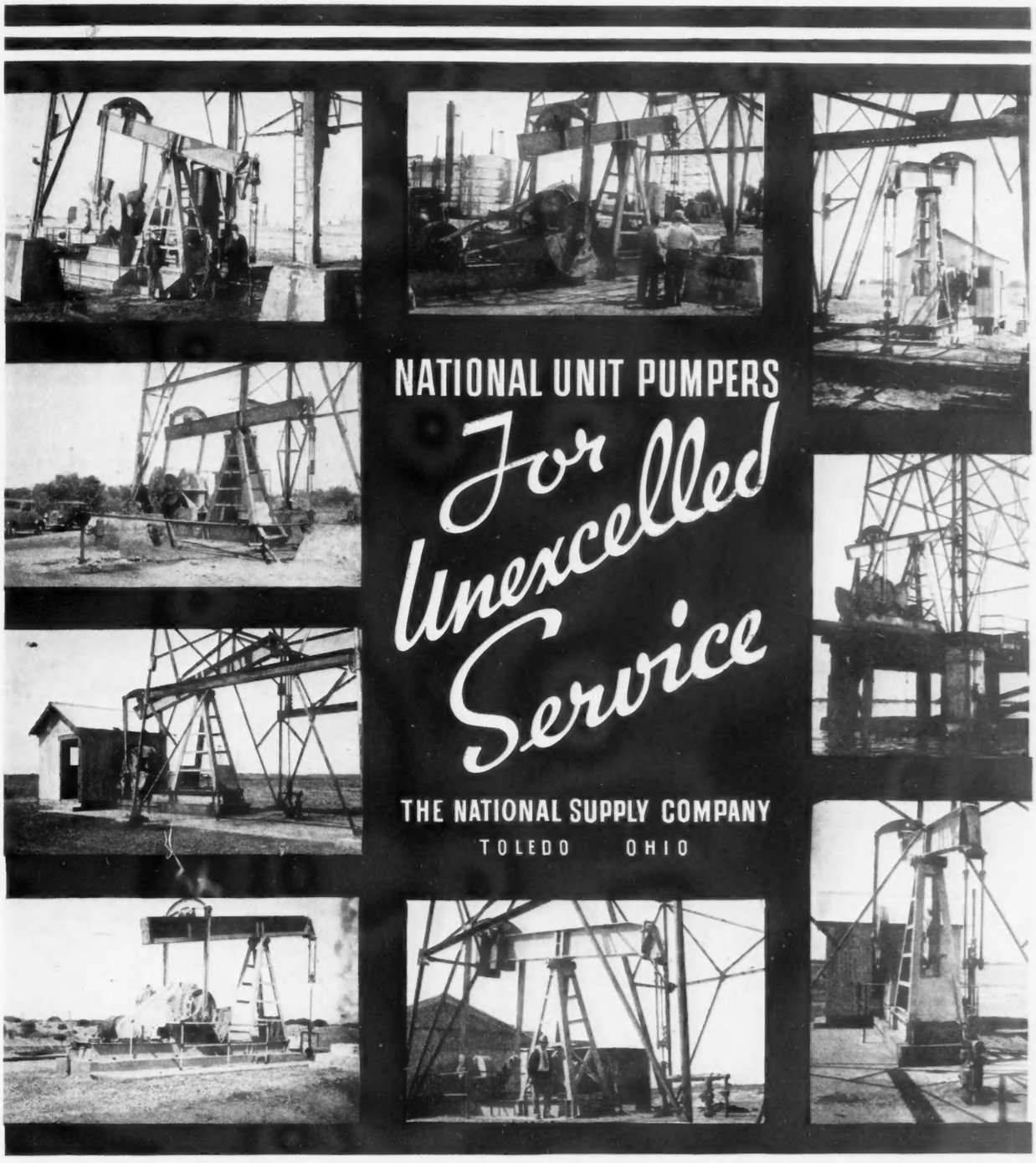
STATE OR DISTRICT	WELLS COMPLETED			BBLS. OF CRUDE PRODUCTION		
	In 1936 (January)	In 1935 (January)	Percent Change	In 1936 (January)	In 1935 (January)	Percent Change
Oklahoma	204	128	+ 59	15,209,250	14,891,650	+ 2
Kansas	89	80	+ 11	4,347,200	4,327,650	+ ½
Texas	779	756	+ 3	32,248,250	31,186,900	+ 3
Louisiana	47	59	− 20	5,499,550	3,423,350	+ 61
Arkansas	5	20	− 75	930,700	985,600	− 6
Southeastern States	....	3	−100	.....	.....	.....
Eastern States	171	181	− 5	3,216,750	3,193,400	+ ¾
Michigan	68	27	+152	1,265,250	1,001,550	+ 26
Wyoming	4	1	+300	1,100,750	1,049,900	+ 5
Montana	10	8	+ 25	396,250	367,550	+ 8
Colorado	....	1	−100	124,450	114,300	+ 9
New Mexico	22	28	− 21	1,806,450	1,476,650	+ 22
California	67	82	− 18	21,057,500	15,511,311	+ 36
Total	1,466	1,374	+ 6.7	87,202,350	77,529,811	+ 12.5

Wells Completed in the United States

(Including oil wells, gas wells, and dry holes)

MONTH	Daily Average
January, 1933	30.0
February	30.6
March	26.6
April	25.5
May	25.6
June	21.1
July	23.1
August	30.7
September	36.5
October	40.9
November	46.9
December	47.7
January, 1934	39.7
February	38.1
March	40.6
April	44.0
May	50.7
June	51.5
July	53.6
August	51.3
September	43.2
October	49.6
November	49.9
December	48.3
January, 1935	47.9
February	49.6
March	48.8
April	58.5
May	*63.6
June	58.6
July	60.9
August	62.8
September	57.9
October	57.1
November	55.2
December	54.2
January, 1936	52.4

*Highest since July, 1930, when completions averaged 76.6 daily. Average dropped in August, 1930, to 52.4 and remained below that figure until July, 1934.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THE NATIONAL SUPPLY COMPANY
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National

mestic demand for gasoline was about six percent greater than in 1934, setting a new peak; and for 1936 a further increase of similar percentage is expected.

Slightly Less Drilling

Wintry weather apparently was largely responsible for the slight contraction of drilling activity in January, as compared with the previous month. For the four weeks ended January 25, 1936, completions of wells in the United States averaged 52.4 daily, compared with 54.2 daily in the preceding five weeks. The completions have been decreasing gradually during the past five months. However, the January, 1936, average was higher than for either of the first three months of 1935. The 52.4 completions per day of January, 1936, compare with 47.9 daily for January, 1935; with 39.7 daily for January, 1934; and with 30 daily for January, 1933. These averages mean that January, 1936, completions were nine percent more numerous than one year ago, 32 percent ahead of two years ago, and 75 percent above those of January three years ago.

Although the United States as a whole showed more completions for January, 1936, than for January, 1935, there were widely varying increases for individual states, while about half the states showed decreases. There were more completions for Oklahoma, Kansas, Texas, Michigan, Wyoming, and Montana. But decreases in completions as compared with January, 1935, were registered by Louisiana, Arkansas, the Southeastern or Eastern Gulf States, the Eastern States, Colorado, New Mexico, and California.

To Become Active

DRAFT PLATFORM FOR TEXAS DIVISION OF ASSOCIATION

FORT WORTH.

REORGANIZATION of the Texas division of the Mid-Continent Oil & Gas Association with an enlarged full-time personnel to deal with common problems faced by the petroleum industry in Texas was approved by the membership at session held here January 25. It is the oldest body of oil men in the state, and has never been involved in matters of a controversial nature within its ranks. However, it has been somewhat dormant during the past five years while various factions clashed on proration restrictions. Presentation of the industry's position in opposing threatened discriminatory tax measures will be conducted by the organization as the principle plank in its future program.

Will Fight Taxes

Jake L. Hamon, Dallas independent, who was recently elected president of the division at special meeting of the board to succeed Edward T. Moore, Simms Petroleum Company, Dallas, stated that the oil industry must counsel with state and local authorities to forestall the enactment of unjust taxes. Reviewing the tax burdens now borne by the oil industry, J. D. Collett, Fort Worth operator and president of the general body of the Mid-Continent Oil & Gas Association, predicted that the petroleum interests would be the target for additional taxes during the current year. He pointed out that taxes paid by the industry have been three times greater than its net profits.

Recommendations of a special committee of 16 appointed recently by the board to perfect a plan of reorganization and outline a program for the ensuing year carried the unanimous approval of the membership. W. H. Francis, vice president of Magnolia Petroleum Company, Dallas, was chairman of the committee.

Major activities of the division as approved shall be seeking in every legal way to prevent the imposition of any unjust and inequitable taxes on the oil industry, and wherever possible to bring about a reasonable reduction of the taxes to which the industry is now subjected. Support against tax evasion and the elimination of controversial questions were likewise approved. The old board of directors was removed and replaced with active oil men representing all branches and all sections of the state. Approximately 100 names were included in the revised roster, and the list will remain open for 30 days to permit the filing of additional names.

Under the reorganization plan the affairs of the body will be conducted by an executive committee of 27 members, with the aid of sub-committees. Personnel of this committee will be selected by Mr. Hamon. It will assume the responsibilities of appointing a vice president from each of the main producing districts. Paid employes will include an executive vice president, expert tax statistician and necessary office help. Selection of this new personnel will be left to the executive committee and the president.

Walter Cline, Wichita Falls, was introduced as the first president of the Texas body. Chas. F. Roeser, Fort Worth, president of the Independent Petroleum Association of America, stated that responsibility rests upon every oil man in Texas to support the Texas division in its projected drive against unjust taxation. Brief talks were also made by E. B. Germany, Dallas, former president of the Independent Petroleum Association of Texas, and Wallace Jenkins, Dallas independent.

Plan of reorganization as recommended by the special committee, headed by Mr. Francis, met with the approval of the membership, and included the following points:

1. The major activity of the association to be directed toward the opposition in every legal way to prevent additional and inequitable taxation and to seek in every legal way the reduction of unjust and discriminatory taxation.
2. To seek in every legal way the prevention of tax evasion.
3. The association is to engage in no controversial matters of policy and control of the industry.
4. The association may participate in discussion of controversial questions by unanimous action of its executive committee.

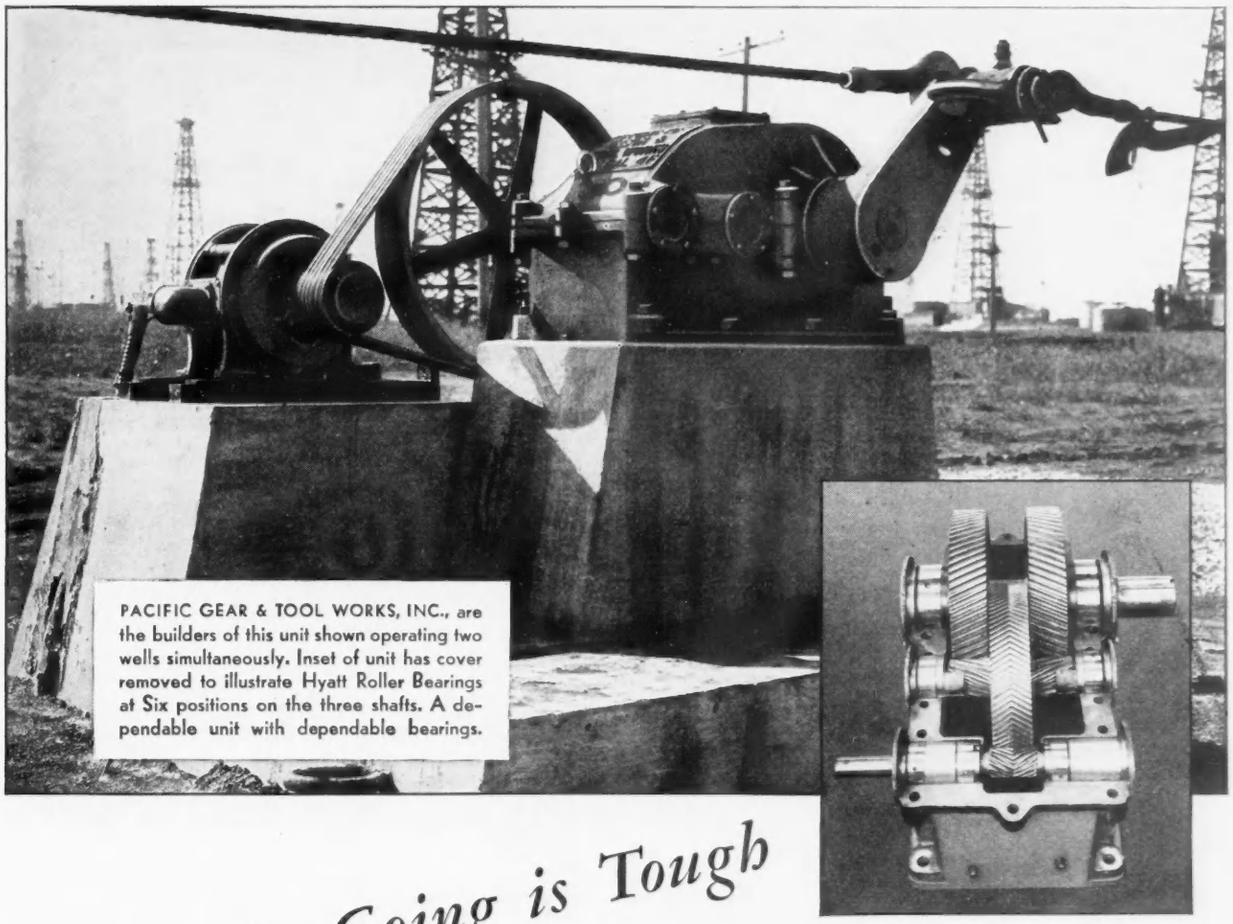
Governing Body

5. The business of the association to be administered by an executive committee of 27 named by the president, who is an ex-officio member.
6. In addition to the president and employed staff the officers to include a vice president for each major division of the state, preferably the president of the principal local association in that division.
7. The executive committee empowered to select and employ an executive vice president and an expert tax statistician, a necessary staff to carry on the business of the association and to maintain a necessary office for the purpose.
8. The president empowered to appoint a membership committee of seven, who will be empowered to adopt and collect from the membership a reasonable budget for carrying on the business of the association.
9. Membership of two classes, active for those in the business, with membership of $25 per year; affiliate for those connected with it in other than active capacity for $5 per year.
10. Executive committee empowered to study existing by-laws and recommend any changes which might be necessary.

Supplemental list of directors (see THE OIL WEEKLY, January 27, 1936) added includes the following: James Abercrombie, Houston; Hiram King, Houston; L. R. Hagey, Amarillo; Ralph Ogden, Austin; Jim Nash, Austin; Dan Moran, Houston; Jack Porter, Houston; Steve Farrish, Houston; Herman Heep, Houston; John McCarthy, Houston; C. C. Cartwright, Fort Worth; Ed. Gildart, Beaumont; Wallace Wilson, Houston; W. C. Stroube, Corsicana; Joe R. Pearson, Corsicana; Fleetwood Richards, Lockhart; Myron Blaylock, Marshall; C. A. Lester, Dallas; Bryan W. Payne, Tyler; Jake D. Standifer, Breckenridge; J. P. Cusack, Midland; W. M. Harrison, Fort Worth; Hardy Bailey, Austin; R. W. Norton, San Antonio, and E. R. Mosby, Houston.

TULSA A.P.I. MEET

Tulsa.—On Wednesday evening, February 12, members and guests of the Tulsa Chapter, Production Division of the American Petroleum Institute will hear Dr. W. W. Love, research engineer for Dowell, Incorporated, discuss acid treatment of oil producing formations. This method of increasing production came into general use in the Mid-Continent area about three years ago and has come to be a standard completion practice, especially in western Kansas where most of the production is from limestone formations. Anyone interested in the subject is invited to attend the meeting which will be held in the Mayo Hotel.



PACIFIC GEAR & TOOL WORKS, INC., are the builders of this unit shown operating two wells simultaneously. Inset of unit has cover removed to illustrate Hyatt Roller Bearings at Six positions on the three shafts. A dependable unit with dependable bearings.

Where the Going is Tough
HYATTS *Serve!*

All new equipment should be able to perform well, but the real test of its mettle is how well it will operate in the years to come. With this thought in mind, the designers of today's mechanical devices turn to Hyatt Roller Bearings to endure the merciless punishment of steady operation, shock loads, and the toughest going . . . without perceptible wear and without continuous care. It is significant, therefore, that designers of equipment invariably turn to Hyatts when the going promises to be tough. Hyatt Roller Bearing Company, Newark, Detroit, Chicago, Pittsburgh, San Francisco.

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MEN IN THE INDUSTRY'S NEWS

H. M. MACOMBER HAS BEEN ACTIVE IN OIL BUSINESS SINCE DAYS OF SPINDLETOP BOOM IN 1901

NOW IS IN CHARGE OF FIELD OPERATIONS FOR VARIOUS GETTY COMPANIES

H. M. MACOMBER

H. M. MACOMBER, executive vice president in charge of field operations for Pacific Western Oil Company and various Getty companies, got his first experience along the Texas Gulf Coast, his father having been a pioneer oil man in the Spindletop area. He went to California in 1910 with a thorough knowledge of production and development methods then in vogue in Texas. His first California connection was with Kern Trading and Oil Company, an organization then active in the San Joaquin Valley. In 1912 he became associated with Standard Oil Company of California and remained with the company until 1922 in various capacities.

After four years as a successful drilling contractor, Macomber became associated with J. Paul Getty, who was then carrying on extensive town lot operations in California. He remained with Getty for a year. Turkish Petroleum Company, whose operations thus far had not been too successful, sought his services in 1927. Taking with him his entire organization that he had known for years, Mr. Macomber successfully completed an intensive program that established Irak as a major producer in the world market. He has several 100,000-barrel wells to his credit, and among other achievements definitely established in the oil world the superiority of American equipment and methods.

In 1929 he became head of Getty operations in Texas and New Mexico, but in 1930 returned to California to take charge of all development and production for the Getty interests. More recently he became head of field operations for Pacific Western Oil Company, in addition to his duties with George F. Getty, Inc.

JAMES B. O'BRIEN, for the past three years assistant general manager of Huasteca Petroleum Company, subsidiary of Standard Oil Company of New Jersey, in Tampico, Mexico, late in March will take over the position of assistant general manager of Lago Petroleum Company in Maracaibo, Venezuela. January 25 O'Brien was tendered a farewell banquet by about 50 of his friends at the Tampico Country Club, following which he left for a vacation in the United States.

HENRY N. TOLER, formerly assistant supervisor of the Mississippi State Oil and Gas Board, has been appointed to fill the unexpired term ending in June, 1936, of Dr. George C. Swearengen, who died January 10. Dr. Swearengen was the first supervisor named to head the board when it was created several years ago.

E. J. KLOPFENSTEIN, petroleum engineer in the Oklahoma City district of Indian Territory Illuminating Oil Company since about two years after discovery of the Oklahoma City pool, has been made district superintendent of production for the company in the Seminole district. Klopfenstein worked at one time for the company as a roustabout and junior engineer while taking his petroleum engineering work at the University of Oklahoma. He succeeds B. O. Hindman, resigned. Concurrently the company announced transfer from Oklahoma City to the Seminole district of C. C. Brunton as petroleum engineer and P. B. Nichols as geologist in the production department.

COLONEL HARRY T. KLEIN of New York City, vice president of The Texas Company, has been reelected chairman of the American Petroleum Industries Committee for a third term. Edwin S. Hall, counsel for Standard Oil Company of New Jersey, was reelected secretary, and Baird H. Markham, director of the committee, was reappointed to that post, which he has held since the formation of the committee in 1933.

The committee created the office of assistant secretary, and Herbert Galloway, formerly of Continental Oil Company of Ponca City, Oklahoma, was appointed to that position. Prior to his work in the comptroller's office of Continental Oil, Galloway was employed by Harris and Haun, independent producers of crude oil and natural gasoline, in Blackwell, Oklahoma. The committee was organized in 1933 to aid gasoline tax administrators in the strengthening of state gasoline tax laws, to eliminate gasoline tax evasion and to act as a service organization to the oil industry in connection with tax and legislative matters.

DR. C. W. TOMLINSON, for many years manager of the Schermerhorn-Ardmore Company, and since dissolution of that firm, chief geologist for Schermerhorn Oil Corporation, will enter the consulting field with offices in the Simpson Building at Ardmore, Oklahoma, on March 1. Tomlinson is a graduate and former instructor of the University of Wisconsin and is considered an authority on southern Oklahoma geology after having spent approximately 15 years in that part of the state. He will address the Mid-Continent Royalty Owners Association in Tulsa February 11.

J. B. BARNETT, assistant general manager of Lago Petroleum Company in Venezuela for several years, recently arrived in Tampico, Mexico, to take over duties of assistant general manager of Huasteca Petroleum Company. Prior to connection with the above two subsidiaries of Standard Oil Company of New Jersey, Barnett was in the employ of Compania Mexicana de Petroleo "El Aguila", S.A., Royal Dutch Shell subsidiary, at Tampico, which city he left to go to Maracaibo in 1922.

R. W. McDOWELL, vice president of Mid-Continent Petroleum Corporation, and E. R. Filley, manager of the Kansas-Oklahoma-Kentucky division of The Texas Company, discussed the outlook for the petroleum industry before the Tulsa Chamber of Commerce at a luncheon on Friday, January 24.

H. A. HARRIS, petroleum engineer of Trinidad, will present a paper entitled "Costs of Drilling" before the January 29 meeting of the Trinidad branch of the Institution of Petroleum Technologists at San Fernando.

T. C. HEISTAND, for the past several years head of the land and geological department in Tulsa for W. C. McBride Incorporated, will join the geological department of Indian Territory Illuminating Oil Company on February 1. Heistand, who has been very active in affairs of the Tulsa Geological Society, graduated from the University of Indiana in the winter of 1921-1922 and shortly afterward joined the geological staff of Pure Oil Company. He has been with the McBride organization since 1927.

ERNEST HARTFORD, assistant secretary of the American Society of Mechanical Engineers, New York, was the principal speaker in a joint meeting of the Mid-Continent Section, American Society of Mechanical Engineers and the Engineers Club of Tulsa, January 24.

CHARLES L. LOCKETT, executive with Oil Well Supply Company, has returned to New York after a Christmas vacation in Maracaibo, Venezuela. Mrs. Lockett accompanied him.

E. RUSSELL LLOYD, district geologist for Superior Oil Company of California, was elected president of the West Texas Geological Society at annual meeting held at Midland, January 24. P. D. Moore, San Angelo consulting geologist and operator, and M. B. Arick, geologist for Humble Oil & Refining Company, Midland, were elected vice president and secretary-treasurer, respectively.

J. A. McCUTCHIN, Panhandle District exploitation engineer for Shell Petroleum Corporation, gave a paper entitled "The Relation of Earth Temperatures to Geological Structure" before the Panhandle Geological Society at their monthly meeting held January 23.

GORDON QUILTER, for several years a practicing attorney in Tulsa and more recently of Brownsville, Texas, has joined the legal staff of Phillips Petroleum Company at Bartlesville.

H. EVERETT LONG, chief clerk in the geological department of Mexican Gulf Oil Company, has returned to Tampico, Mexico, after a vacation in Southern California. He made the trip by automobile.

LAURENCE LOCKHART of London, general department, Anglo-Iranian Oil Company, Limited, recently was awarded a Ph. D. degree for a thesis on the career of Nadir Shah. Dr. Lockhart's hobbies are Iranian history and photography.

R. C. BAKER, president of Baker Oil Tools, Inc., Huntington Park, California, accompanied by Mrs. Baker, is visiting the Mid-Continent and Gulf Coast areas.

DR. J. BRIAN EBY was the speaker at the Houston Geological Society's regular weekly luncheon meeting January 30. He discussed the geophysical history of the Tomball oil field of Harris County, Texas.

W. J. ARMSTRONG, chief of the oil and gas conservation department of the Oklahoma Corporation Commission, thinks he will be able within the next week or so to throw away his crutches but expects to use a cane for several weeks. Armstrong sustained a dislocated and broken ankle at the American Petroleum Institute's annual meeting last November in Los Angeles.

J. H. HILL, general counsel in the Kansas-Oklahoma-Kentucky division of The Texas Company, conducted a discussion of tax matters before the Petroleum Accountants Society of Oklahoma January 24. The meeting was opened with a dinner at 6:00 p.m.

F. F. DEVINE, assistant general manager of Mexican Gulf Oil Company at Tampico, Mexico, was called to San Antonio, Texas, last week by the death of his mother.

DR. EDWARD BARTOW, president of the American Chemical Society and head of the chemistry department at the University of Iowa, was the principal speaker at the annual meeting of the petroleum group of the society, at Tulsa January 25.

F. S. BRYANT has been appointed manager of the exploration division of the Producing Department, Standard Oil Company of California, with headquarters in San Francisco, effective February 1, 1936. This is a new division in the Producing Department, created for the purpose of coordinating the activities of the Geological Division and the Land and Lease Division, particularly affecting such activities within the United States and Canada. Effective February 1, 1936, G. F. Schroeder is appointed Assistant Manager of the Land and Lease Division of the Producing Department, with headquarters in Los Angeles.

AXTELL J. BYLES, president of the American Petroleum Institute, arrived in Oklahoma City Tuesday night and was in conference Wednesday, January 29, with oil leaders of the state. Questioned as to his opinion of conditions within the industry, Byles said, "Conservation, as I see it, is saving the reservoir energy of oil fields and I don't think there is any appreciable waste of oil or gas in the country today. We may be wasting some reservoir energy but this can be prevented by not overproducing the oil fields. There is no sign of a shortage of oil, either," he asserted. "That is one of the greatest bugaboos built up around the oil industry. There will never be a shortage or exhaustion in my generation, nor in the generation of our children. Long before there is a shortage, we will have substitutes to take the place of motor fuels." He was in conference during the day with Governor Ernest W. Marland, chairman of the Oil Compact Commission; Charles F. Roeser, president of the Independent Petroleum Association of America; and Robert S. Kerr, president of the Kansas-Oklahoma division of the Mid-Continent Oil and Gas Association.

E. L. SHEA, president of the Tide Water Oil Company, was in Houston during the past week after visiting the Louisiana Gulf Coast on an inspection trip. He was accompanied by E. H. Salrin, vice president of Tide Water Oil Company. Ralph Pringle vice president was also a visitor in Houston.

BYRON POST, city salesman in the Tulsa area for Oil Well Supply Company, has been made assistant manager of sales in the same area to act under E. E. "Ned" Robbins, manager of sales in the Mid-Continent. Paul B. Cruce, formerly with the Marathon Oil Company and more recently with Shell Petroleum Corporation, has been made sales engineer to specialize in sucker rods and other subsurface lifting equipment. He is now in the factory at Oil City, Pa.

D. J. WALLACE, safety engineer for Sinclair Prairie Oil Company, was the principal speaker at the regular monthly meeting of the Ada Chapter, Production Division of the American Petroleum Institute held in Ada on Friday evening, January 31. A motion picture of the Fitts pool was presented by the Halliburton Oil Well Cementing Company.

HAROLD B. FELL, executive vice president of the Independent Petroleum Association of America, discussed the importance of the oil industry to Tulsa and Oklahoma, at a meeting of the Joe Carson Post of the American Legion, January 21.

JOHN O'SHAUGHNESSEY, son of I. A. O'Shaughnessey who is president of the Globe Oil and Refining Company, has been elected vice president and general manager of Lario Oil and Gas Company, succeeding F. J. Jahle of Blackwell, Oklahoma, who continues as vice president and general manager of Globe. Young O'Shaughnessey will move from Oklahoma City to Wichita, Kansas, where the Globe's active producing subsidiary has its general headquarters.

W. H. CARSON, head of the petroleum and mechanical engineering schools of the University of Oklahoma, has been appointed chairman of the Petroleum Division, American Society of Mechanical Engineers, succeeding H. F. Brindel, mechanical engineer for Gypsy Oil Company, resigned.

D. K. SMITH, manager of Globe Petroleum Company at Carbona, Veracruz, Mexico, spent several days in San Antonio, Texas, recently.

ROBERT L. DICKINSON, Republic Supply Company, has been transferred from the Oklahoma City-Ada district to the company headquarters in Tulsa.

JAMES A. FREAR, chairman of the Federal oil tender board in the East Texas field, has resigned. He will return to Washington and enter private law practice. Frear has been chairman of the board for only a few months.

DIED:

GOVERNOR OSCAR K. ALLEN of Louisiana died suddenly at Baton Rouge January 28 and was buried at his home in Winnfield, Louisiana, January 30. Governor Allen owned oil interests in East Texas, in Sabine Parish, Louisiana, and in Miller County, Arkansas, just north of the Rodessa field. Lieut-Governor James A. Noe of Monroe, well-known independent operator of Monroe, and an associate of Governor Allen in some of his oil operations, was sworn in as governor to fill the term which expires May 11.

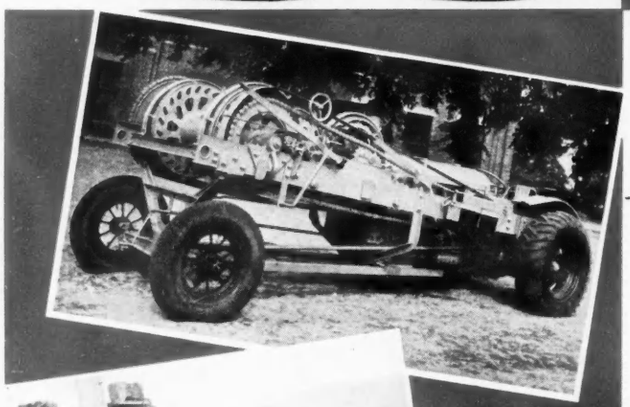
WALKER WILSON, 38, traffic manager for Cosden Oil Corporation, died January 27 in a Fort Worth hospital from head injury received 11 days previously in Dallas when he lost his footing on ice coated pavement. He had been associated with the Cosden interests more than a decade.

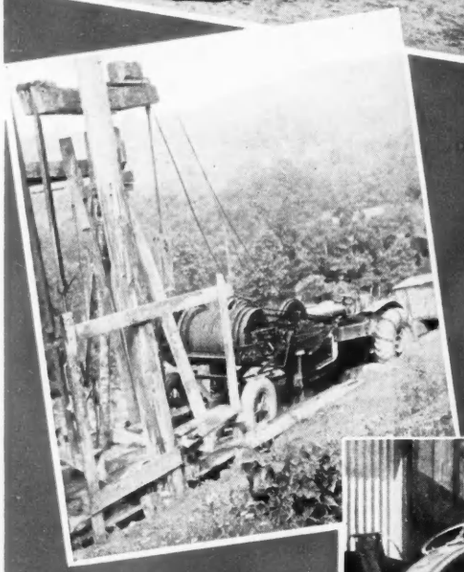
S. M. COLLINS of Monroe, Louisiana, credited with drilling the discovery well in the shallow Urania, Louisiana, field in La Salle Parish, died recently at Monroe.

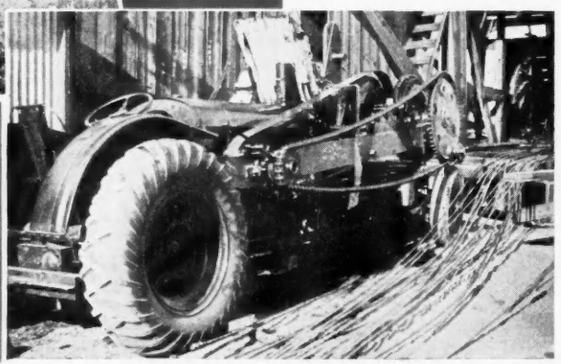
JOHN HUFFMAN, 32, chief clerk for Big Lake Oil Company, Texon, Texas, was fatally injured January 29 in an automobile accident near Ozona, Texas.

CLEVE PHILLIPS, scout for The California Company, San Angelo, Texas, died January 22, 1935, after being ill for some time. He was the only scout holding life membership in the National Oil Scouts Association of America.

Let's CLEAN "HOUSE"







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The ALLIS-CHALMERS High Speed, Double Drum UE or UM Winch Tractors, will do the jobs of lease and production maintenance quickly and safely.

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Applications for Aerial Photography

CORRECTNESS, SPEED AND ECONOMY USEFUL IN SOLVING MANY VITAL OPERATING PROBLEMS

By DENNIS S. SNEIGR

AERIAL photography, while used to a very limited extent before 1914, in reality was born and developed of a necessity created by the World War.

Since the war aerial photography has been applied more and more to private industry. The more exacting demands of highly specialized industries have led to intensive development of better, more economical, and faster methods of aerial photography.

The oil and gas industries have found aerial photography especially useful in solution of vital problems because of its speed and economy.

For the purpose of clarity in showing how aerial photography may be applied to the oil and gas industry, this article is divided into the following four subdivisions:

1.—Geological applications
2.—Geophysical applications
3.—Pipe line applications.
4.—Ownership mapping applications.

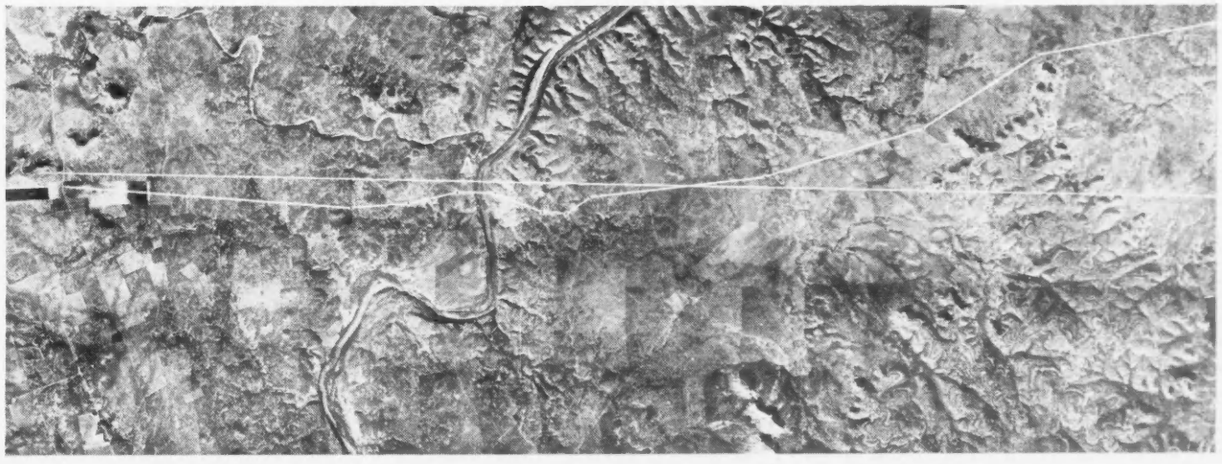
Geological Applications

To the geologist the aerial map presents a picture of the surface geology that can be obtained only by this method. Besides presenting an accurate map of the ground, the aerial map is a photograph which clearly shows every detail of the territory.

Outcrops, faults, contact swings, topographic highs, the different soil colors, the changes in vegetation, and the directions of drainage, all may be present on the aerial photographic map.

These surface features can reveal important geological information that might otherwise be overlooked entirely if the usual methods of ground work were used.

For field work, the aerial map is a valuable asset as a time saver, as it often will eliminate the necessity of running alidade traverses, since the roads and trails are so clearly marked, the geologist will be able to keep himself located and can record his findings accurately upon the aerial map. The aerial map is taken into the field. The territory to be covered is shown photographically in its every detail. Highways, roads, and mere trails are apparent. Streams, swamps, highs, wooded sections all appear on the map. With such a detailed map of the country before him, the field man is able to accurately locate his position on the map at any time. Thus he



Section of aerial photographic map used in locating route of Shell Pipe Line Company's line from West Texas to Houston. The straight white line is the line sought to be followed as closely as possible and the irregular line shows the route selected after detailed study of the topography, river crossing and other difficulties revealed by the map. (Reproduced through courtesy of Edgar Tobin Aerial Surveys.)

Shadows cast upon the earth by clouds make aerial maps unsatisfactory, making it necessary that surveying be done in fair weather.

can plan the most efficient course in advance and keep a very definite and exact record of his work.

Important geological features may be drawn on the map as the field man progresses across the territory. These indications can be located exactly because of the great detail shown on the map. In some cases, the field man may be following an outcrop that is poorly marked by scattered exposures. From his ground position and his limited field of vision it may be very difficult or impossible to follow the formation. But a study of the aerial map may reveal the features and line of outcrop as a complete picture, easily located on the ground and more readily interpreted.

In this day of keen competition, time means the difference between success and failure—profit and loss. It is a matter of days that an aerial map of a given section of country can be placed in the hands of the geologist where it might be a matter of months if the area was mapped by the usual ground methods. This saving in time can easily mean the difference in price of acreage secured in advance of the play or bought after extensive leasing has resulted in much higher prices.

Geophysical Applications

In geophysical exploration work, the aerial map plays a large part as a time and money saver.

A photographic map of a given area, placed in the hands of the geophysicist before the actual field work starts, will enable him to plot his work accurately and systematically. It must be remembered that the aerial map is also a photograph. On it are pictured all the details of the landscape from wooded areas, rivers and streams, to houses and the main and side roads.

With the information graphically displayed before him on a map, the geophysicist is able to plan his while survey, spotting his stations, and using the shortest distance on the roads in moving from one station to another.

In recording results of field work, aerial photograph maps are greatly superior to the usual county abstract maps because of their greater accuracy. Especially is this true in reflection profile shooting, because in no other method of geophysical exploration is it so necessary that the land surface and the record map exactly coincide.

It is no doubt reasonable to assume that numerous dry holes which have been attributed to faulty geophysical work might more accurately be assigned to inaccurate maps, because in some instances county maps have so distorted the shooting results that structures which are actually present have not been shown; and on the other hand, structures have been shown where in reality none exist.

In summation it is evident that the large scale photographic quadrangles are useful in detailing small areas, and on regional maps, made from the aerial maps, the different detailed areas can be correlated after sufficient surveys have been made to permit of regional work.

Pipe Line Applications

By first flying and photographing the proposed route of a pipe line a clear, concise, and accurate picture is obtained. This aerial picture may then be studied with the aid of a stereoscope and stereoscopic prints, and a route laid out which will avoid deep gorges, prominent hills, swamps and sinks, and towns and yet which will still follow the straightest possible line between the two points.

The aerial map, studied in advance, also enables the pipe line department to eliminate unnecessary river crossings and to take advantage of favorable crossing conditions previously known.

Ownership Mapping Applications

To oil men familiar with land department and engineering work, the problems created by the wide discrepancies in the records and surveys of Texas have long been a source of much trouble, wasted time and money. The aerial map provides the most economical, quickest, and most practical solution to these problems by furnishing accurate detail and base maps by means of which these errors may be eliminated.

With the correctly scaled aerial map to work on, the property lines are very easily identified from the plat and deed descriptions. And since the photographic map is an exact representation of the land surface, the discrepancies are automatically eliminated from the boundaries pictured.

In Texas many surveys and counties are bounded by rivers or streams and since the county maps and plats usually show these stream boundaries incorrectly, the aerial photographic map consequently cuts out a large amount of the error by correctly portraying these meandering streams.

Ownership line maps may be constructed on any scale in the usual method by copying the information with the pantograph from the photographic map to the detail paper on which the grid lines have been laid out to the desired scale.

It is impossible to estimate the amount of money and effort that has been wasted as a result of inac-

Aerial map showing township 1 south, range 12 east, Atoka, Oklahoma, the structures, railroads, leases and other geological information.

—Map courtesy Edgar Tobin Aerial Surveys.

curate ownership maps. Practically all departments base most of their activities on ownership maps and since these do not exactly portray the existing boundary conditions, it has happened frequently in the past that much useless acreage has been purchased and in any case much time and effort is wasted.

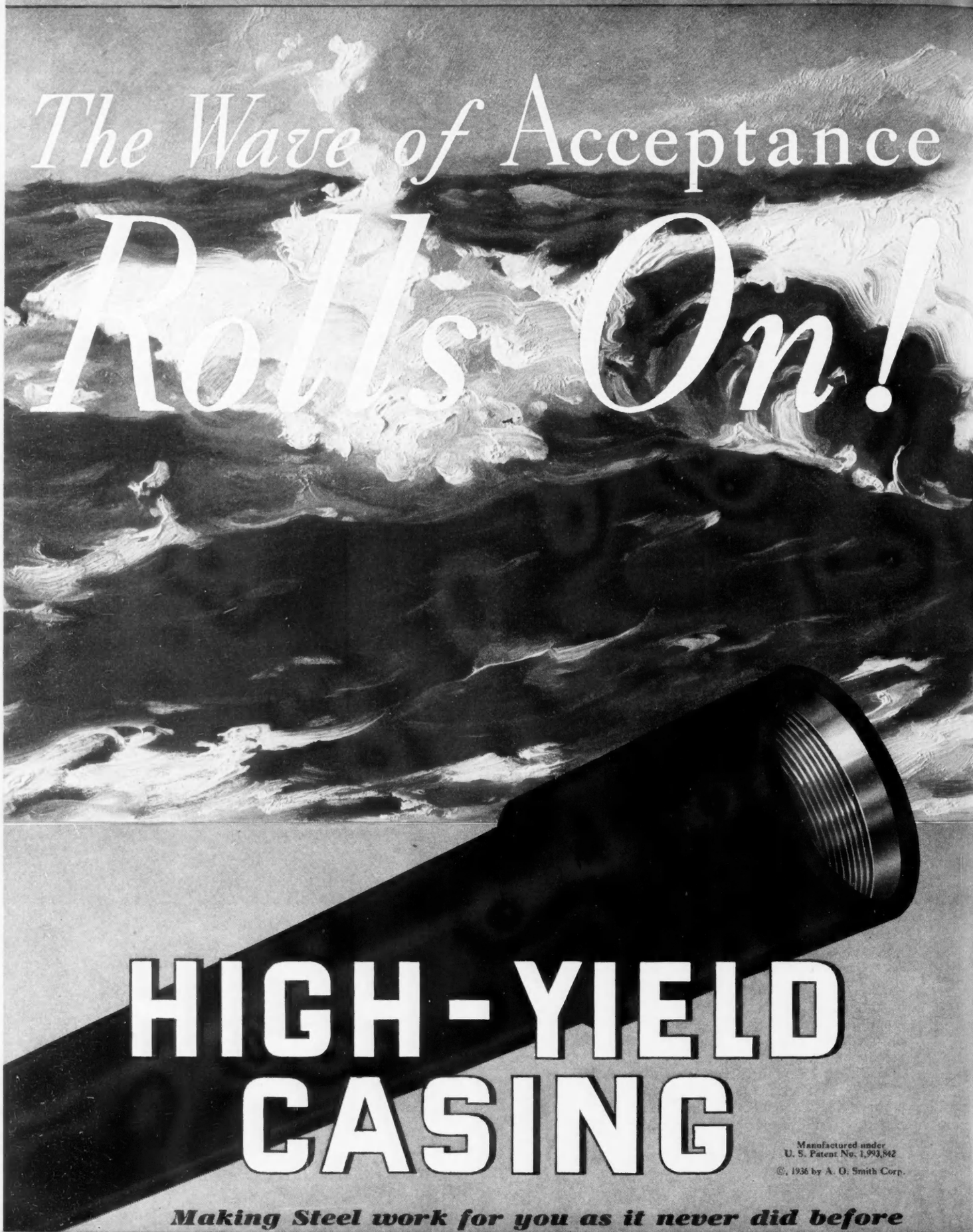
Every day aerial mapping is gaining popularity as a surveying method because of its speed and recording of details. New and more accurate instruments are being applied which give the aerial map more exactness. However, aerial mapping cannot be said to completely take the place of the ground survey. Rather, by applying both methods to mapping problems the best possible results can be obtained.

The aerial photograph records details that can not be obtained by any other method. By using ground control, the aerial map can be made accurate enough for the most exacting work.

In *1935* it was run

The Wave of Acceptance

Rolls On!



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Cleaning Out Paraffin

SOLVENTS SUCCESSFUL IN OVERCOMING SERIOUS PROBLEM AT OKLAHOMA CITY

By JOHN C. ALBRIGHT

BECAUSE Wilcox sand wells at Oklahoma City now are produced artificially, problems confronting operators due to accumulation of paraffin are quite serious. When the field was young and in its prime, paraffin was not a problem, since it could not become deposited due to the high velocity of flow and because the point of expansion usually occurred in the surface equipment, where cooling took place, which is also necessary to some extent for the accumulation of paraffin deposits.

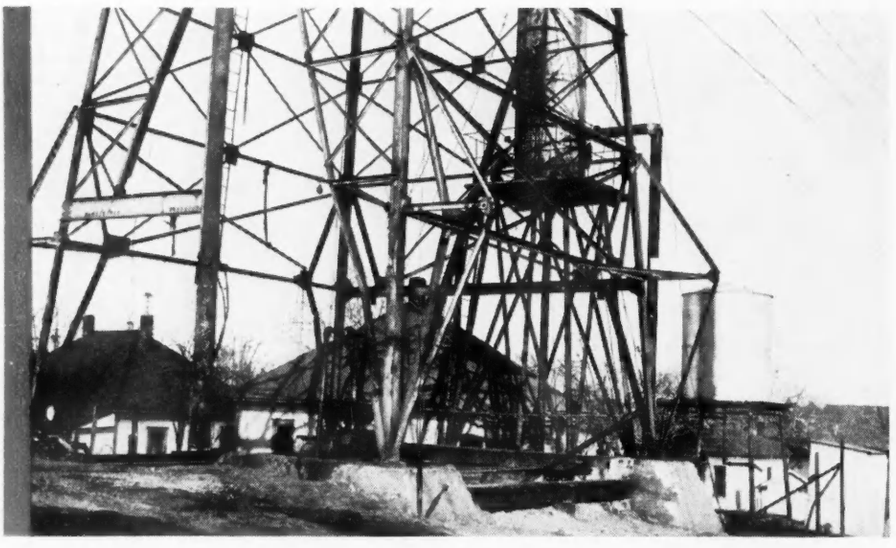
Crude produced at Oklahoma City is high in paraffin content. When individual well pressures had declined to a point artificial methods were required to bring the allowable production to the flow tanks, there was some point down the hole where the pressure change took place, and which became an ideal place for the growth of paraffin deposits. At Oklahoma City, this point is generally encountered at a comparatively shallow depth, usually beginning at 1000 feet and continuing downward.

In cases where submerged electric motor driven centrifugal pumps were in use the deposits were found at the outlet of the tubing, which is usually 1000 feet above bottom. The centrifugal pumps lift the oil this far and then gas lift is employed to carry it the remainder of the way to the surface through the casing. The change in velocity or temperature, or both, at this point is generally believed to be the cause of paraffin deposits in this class of wells. At any rate, from what ever contributing factor of combination of causes, once paraffin starts to form in the annular space between the gas string of tubing and the casing, it is only a short time before the space becomes so restricted that oil is produced only with difficulty and causes excessive back pressure on the motor-driven pump.

When wells are produced by straight beam pumping, and a large number are so equipped in all parts of Oklahoma City, the trouble is apparent inside the tubing string, causing rod trouble and the refusal to produce. Extremely long strings of rods and tubing are necessary at Oklahoma City, since the producing sand is 6500 feet in depth, which factors naturally increase the complications found from the same source in shallower fields.

Solvents Are Being Used

A large number of the producers in Oklahoma City have been using solvents to prevent accumulation of paraffin in wells, and to remove it when it does begin to form. Two kinds of solvents are used generally throughout the field, one of which is natural gasoline, of a grade corresponding to a 26/70 product, while the other is a heavier hydrocarbon fraction, made from the distillation of crude oil in refineries. The heavier product used by a number of oil companies has a gravity of about 40 degrees A.P.I., distilled for the purpose of being a paraffin dissolving agent, similar to, but not exactly like mineral seal oil commonly used in natural gasoline plants



Westgate Oil Company's Corey 4, Section 34-12-3, Oklahoma City, showing tank in right background for solvent storage.

using the absorption method or gasoline recovery from casing head gas.

Those companies who have natural gasoline plants in the field are consistent users of this product in dissolving paraffin. One disadvantage encountered in the use of natural gasoline for paraffin removal from tubing and rods, or from the inside of the casing, is because of the high volatility of the product. It must be transported in pressure truck tanks, loaded under pressure, transported under pressure, and pumped under pressure into the well, whether down the tubing, or down through the annular space between the tubing and the casing. The less volatile material, cut from crude oil in the normal processes of topping plants or cracking units does not present this difficulty, and may be shipped anywhere in the field in ordinary liquid tanks. It may also be pumped from this tank directly into the well, or in many cases, it is unloaded from the trucks into stationary tankage at the well location and used at a later time. Both these solvents have been, and are being used in large quantities throughout the field, and both are reported to be excellent solvents for paraffin deposits.

Casinghead connection on a well in Oklahoma City made so solvents may be siphoned down the casing. Solvent is being run into the well through the one-inch line leading from storage tank.

Wells Are Rocked

A few differences in the application of either of the solvents occurs in this field, depending upon whether the well is on gas lift through the tubing, being pumped with tubing and rods, pumped with a bottom-hole motor-driven centrifugal pump, or a combination of bottom-hole pumping and gas lift through the casing. A greater amount of natural gasoline is used to remove the solvent in any case than when the lower gravity refinery product is applied to the wells. A volume ranging from 1500 to 2000 gallons is ordinarily used when paraffin is to be removed from the annular space between the casing and the gas string of tubing. Casinghead gasoline is pumped from the truck directly into the casing, and when the desired amount has been loaded into the hole, the well is "rocked" several times. By "rocking" the well, the gasoline is brought up the hole until it almost reaches the top, when it is allowed to drop back again into the well. This is done several times while the well is being treated, with an interval between each rocking movement. This interval depends upon the operator's wishes to a great extent, some setting up an interval of one hour between movements of the gasoline, while others move it much oftener, and others keep the gasoline moving up and down the hole constantly. This is accomplished by turning on the gas from the lift lines, and immediately turning it off again as the well is about to be kicked off. If the interval of one hour is used, the well is just kicked off enough to raise the fluid to the top of the casing, when the gas is shut off immediately and the following hour is consumed in letting the gasoline settle back down the hole. Both methods have been used, and each operator accomplishes the same thing; the removal of paraffin.

When the well is treated with the heavier cut from a skimming plant or cracking unit, the nature of the material is such that it can either be pumped directly from the transportation truck tank into the well, or siphoned in from a stationary tank set near the well. Natural gasoline could be siphoned into the well also, because of the absence of flowing pressure on the majority of the producing wells, but because of its volatility, much of it would be lost to the atmosphere if this procedure was followed. The method of washing the annular space is much the same whether casing head gasoline is used, or the heavier distillate is put into the well. Both are "rocked" about the same number of times per treatment to remove the paraffin, and the stated intervals between rocking differ with each operator.

Large Volumes Removed

Most operators in Oklahoma City, as well as in other fields, state that each well is an individual and must be treated as such. While procedure is fundamentally similar in all instances, one well may require a slightly different treatment than a direct offset. Paraffin is loosened up in some strings of casing much easier and with less consumed time than others, while some remain obstinate and require a longer time with more "rockings" per treatment to secure the same results as in other wells. As a rule, it appears that the amount of paraffin that is thought or known to be in a well governs the amount of solvent to be applied, and the number of surges per treatment to obtain an unobstructed flow of oil and gas from the bottom of the hole. The amount of

paraffin in a well may be easily determined by the behavior of the well while on production, and after it has been treated several times, its peculiarities can be pretty well determined. By remembering, or making notes on each well, some of the producers say that the amount of solvent can pretty well be determined in advance of treatment, and the time interval can also be computed before the treatment is begun.

When sufficient time has elapsed during the treatment of the well, and it has been "rocked" to surge the solvent up and down the casing, the bottom hole pump is started, and the gas turned in through the tubing and the well kicked off on production. These combination wells are treated as often as four times per month, some not as often, but it is becoming the practice in Oklahoma City to keep the paraffin accumulation at the lowest possible deposit so each well's allowable can be produced at a minimum cost per barrel of oil lifted.

It is a very common occurrence after treating a well which has been produced with gas lift to blow as much as 30 to 50 barrels of heavy paraffin out of the casing which comes out in the form of an emulsion mixed with the paraffin solvent. Quite often these paraffin deposits will be loosened up and not dissolved in the solvent and slugs of semi-solids will be lifted which will weigh as much as two or three pounds. Usually, if the well is treated regularly, the paraffin will be almost totally dissolved and will readily mix with the oil being produced and can be moved as pipe line oil. When the slugs do appear, however, they usually settle to the bottom of the lease tanks and are drawn from them as tank bottoms and disposed of as such.

Pumping wells which are treated with the low gravity refinery made solvent ordinarily require from 400 to 600 gallons of the solvent two to three times each month. The procedure in this case is to unseat the bottom valve, pump the solvent into the tubing from the tank truck with either a steam-driven pump mounted on the side as a permanent fixture, or pumped by means of a transmission take-off pump. After the tubing has been filled to the top, the solvent is permitted to settle to the bottom of the well when the bottom valve is reseated and the fluid pumped to the top of the tubing head. The process is repeated and continued for a period of three or four hours until such time has elapsed which from experience shows that the paraffin has either been dissolved from the inside of the tubing and from the rods, or, has been loosened to such an extent that it can be brought to the surface with the normal oil production subsequently pumped from the well.

When changing a well from normal gas lift to a combination bottom-hole centrifugal pump and gas lift, paraffin has been encountered sticking to the inside of the casing so tightly and in such volume that it was next to impossible to run the equipment. Westgate Oil Company has encountered such difficulties, and to prevent occurrence of them in wells they expect to convert, solvent is used regularly to maintain a clean wall surface in the casing. One such well, Cary 6 on East Second street Northeast, was treated regularly with the heavy paraffin solvent, and when the bottom-hole pump was run in to be seated, the paraffin deposit was so small that no difficulty was encountered while installing the pump.

The casinghead gasoline used by some of the companies to loosen up and dissolve the accumulated paraffin is what is termed 26/70 gasoline, and which is normally manufactured with the least operating cost in the recovery plant. It also has a vapor pressure sufficiently low that it may be transported in truck tanks without excessive danger of rupturing the vessels mounted upon the trucks, which might occur if the straight product was handled without fractionation of some kind. Lower gravity natural gasoline, and a correspondingly lower vapor pressure, is not considered to have a much better solvent value than the regular 26/70. To manufacture a gasoline having a vapor pressure of 22 pounds, or even as low as 14 pounds would make the cost that much higher, as well as cause the manufacturer of the product to discard a considerable percent of his production.

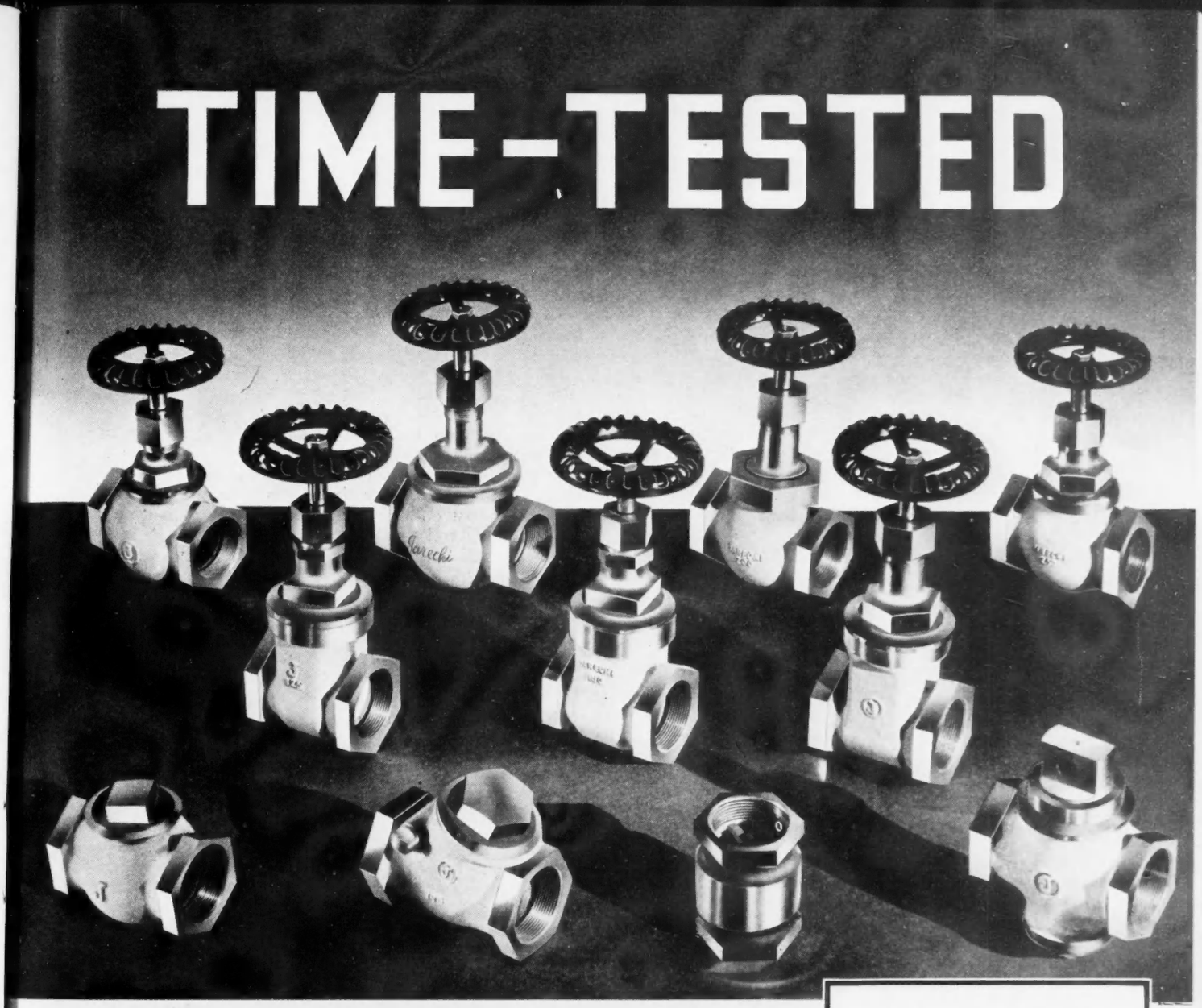
When the standard 26/70 gasoline is used for solvent purposes, much of it is recovered from the gases coming from the wells, and because of this factor in favor of natural, the cost lies in royalties, remanufacture and the like. The gravity of the oil produced immediately from the well being treated with casinghead gasoline is not raised appreciably, because much of the gasoline is expended in blending with the paraffin in the casing or tubing. However, when the gross amount of dissolved paraffin and normal oil pumped or lifted from the well passes through the separator, the difference in the vapor pressure of the paraffin and the gasoline causes a large part of it to separate and pass through the gas lines to the casinghead plants again.

The losses of the remaining portion of the casinghead gasoline which does not pass from the oil while passing through the separators and taken from the flow tanks is not altogether total, because the volume will pass through as pipe line oil and will receive pay as such. With the heavier product coming from refineries and used as a solvent, none of it is recovered as a solvent, but is blended with the oil and dissolved paraffin, but as in the case with the remainder of the natural gasoline, it is recovered and sold as pipe line oil without a loss, except as to the difference in the price paid for the solvent and that received for it as pipe line oil.

Either method, that of using high gravity gasoline or a lower gravity distillate, resolves itself in a lowered solvent effect because of the dilution, or contamination, of the special oil with the crude in the hole. This is considered when pumping, or siphoning in the correct amount, and an extra amount is used to compensate for dilution or contamination. Paraffin is dissolved from the surface of the deposits in the first stages of treating, and the fresh solvent also penetrates between the walls of the metal and the deposits, while the slushing of the liquid up and down the well tends to break away the paraffin and cause it to come from the well in slugs.

The use of either of these solvents is becoming more general throughout the field as the paraffin troubles become more pronounced, and several companies have placed trucks in service which do nothing but transport the solvent to the leases. By handling this production problem in this manner, the treatment becomes more or less of a specialized operation, and consequently after the crews have become familiar with the procedure, several wells can be treated each day by one truck crew. The lease men, or pumpers take the well after the trucks have unloaded the solvent into the well or tanks, and continue the treatment from that point.

TIME-TESTED



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125 lbs. W. S. P.

Heavy Bronze Globe Valve, Composition Disc—150 lbs. W. S. P.

Extra Heavy Bronze Regrinding Globe Valve—200 lbs. W. S. P.

Extra Heavy Hard Bronze Globe Valve
250 lbs. W. S. P.

Standard Bronze Gate Valve
125 lbs. W. S. P.

Medium Heavy Bronze Gate Valve
150 lbs. W. S. P.

Extra Heavy Bronze Gate Valve
250 lbs. W. S. P.

Standard Bronze Horizontal Check Valve—125 lbs. W. S. P.

Medium Bronze Regrinding Swing Check Valve—150 lbs. W. S. P.

Standard Bronze Vertical Check Valve
125 lbs. W. S. P.

Extra Heavy Bronze Steam Cock
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Proper Choking Is Vital

ALLOW CORRECT CONTROL OF FACTORS GOVERNING WELL FLOW EFFICIENCIES

By BRAD MILLS, Associate Editor

THE correct use of chokes or flow beans on flowing oil or gas wells is an important aid in the control of factors that give the most efficient operating results. Determination of the most effective choke size often involves so much effort that the operator simply uses the opening that gives a certain production in a specified time. The immediate response of a producing formation to changes in choke sizes is ample evidence that the rate of flow must be considered where any unusual condition is present, or where a change in the nature of the flow is threatened.

A quick change in the size of a choke on a large flowing well in a new field may not materially affect the gas/oil ratio, percentage of water, or formation pressure, due to the great reserve of flowing strength present. The same change, however, in the size of a choke on a weak flowing well often causes violent fluctuations that lead to serious trouble. In a number of fields operators have been attempting to determine the correct choking practices, and through long series of experiments have established practices that permit continuous operation of many stubborn or marginal flowing wells.

As producing wells grow older and formation conditions change, adjustments in choke sizes are necessary. The importance of holding the correct back pressure on the producing formation is recognized, but in actual practice operators do not give much time to pressure changes, increase in water percentages and fluid levels.

In a number of settled fields where water encroachment is a problem, many wells have been restored to a flowing status by the use of the correct choke size. Under such conditions an extremely small choke usually is not as effective as the intermediate size that permits the production of water at about the rate of entry into the well. Wells of this type are affected sharply by fluid levels, rate of production and origin of water. Bottom water is often less serious than intermediate or top water.

Incorrect use of chokes on large flowing wells in new high-pressure fields may seem to give satisfactory results, but future trouble should be expected where large chokes permit too rapid withdrawals. The flowing energy in most of the flush fields is derived from the action of a gas cap, from water drive, or from the dissolved gas in the oil. Conservation or proper use of these energies involves the application of suitable chokes. In fields having a gas cap "drive," wells completed in the lower part of the producing formation may flow at high rates with a low gas/oil ratio for a long period, but such practice gradually spreads the gas cap, dissipates the flowing energy and increases the channeling action of the gas.

Every well has its critical or most efficient producing rate, and at any time in the flowing life of a well the most effective back pressure can be found. It obviously follows that control of this back pressure must be held by a choke of some type. Maintenance of high back pressures is necessary in many fields as a safeguard against one or several sources of trouble. The proper back pressure against the producing formation tends to preserve the mechanical condition of a well, in addition to preventing irregular encroachment of water through porous sands.

Each Well Different

It does not follow that the smallest choke that will give the well allowable in 24 hours is the correct size. In a number of settled fields, the practice of flowing wells for 12 hours through an intermediate size choke is a better practice than flowing the wells a full 24 hours through a smaller choke. Each field and even each well is a separate problem, since water, sand, paraffin and gas must be considered. In many fields, the largest choke that will not encourage water coning or gas channeling is the correct size, but most of the producing areas in this classification are at least half through their flowing periods. In the experimental work to determine the proper choke size, the chief measuring stick may be the gas/oil ratio, percentage of water, paraffin accumulation or fluid level. Conditions vary through the life of a flowing well and the efficient back pressure can be found only by experimenting. It is the controlling factor in any flowing well, regardless of the rate of flow or the type of choke used. Back pressure control is the recognized means of obtaining maximum recovery efficiency.

The Conroe, Texas, field is a producing area with a variety of formation conditions that call for various choking practices. Although most of the wells produce with a low gas/oil ratio, salt water encroachment, high gas volume and paraffin are problems in some parts of the field. In this field changes in choke sizes do not materially affect the gas/oil ratio in ordinary wells. One company experimented with more than a dozen choke sizes but found the gas/oil ratio did not vary but a small amount throughout the full choke range. Wells of this type produce clean oil and are draining a formation that still retains a high percentage of the original oil that was in place.

In a number of Conroe wells that make an appreciable percentage of salt water, it has been necessary to use comparatively large chokes to prevent the accumulation of water in the casing and tubing, a condition that has killed many producers. The use

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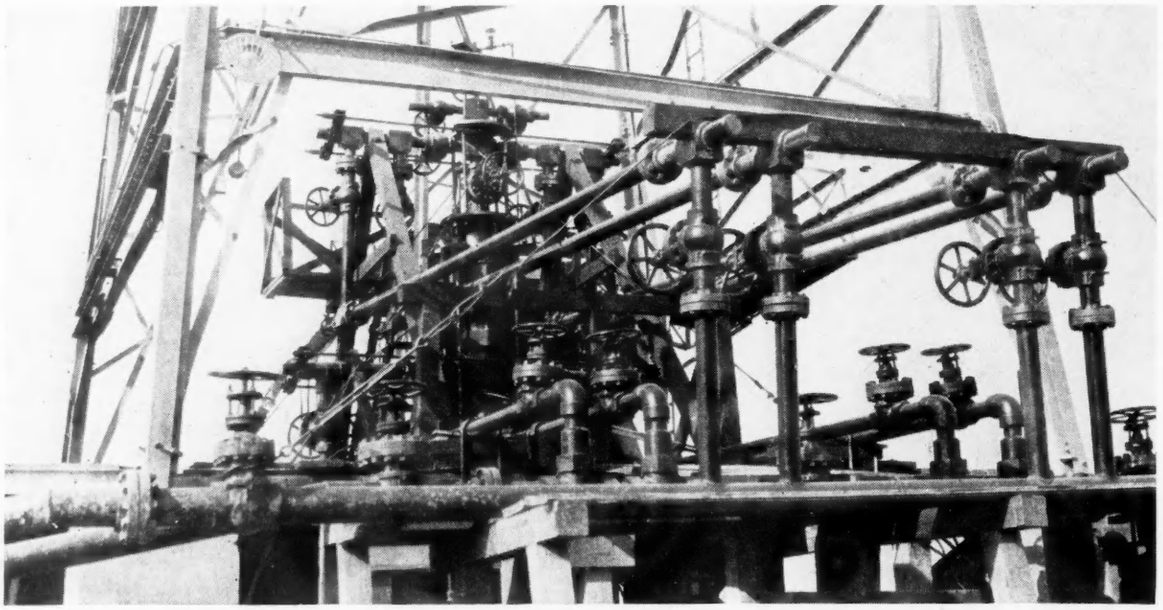

This early producer at Kettleman Hills was equipped with eight chokes.

of a very small choke resulted in a rate of flow that would have given the well allowable in 24 hours, but the action of the salt water killed the flow in a short time. Many wells of this type that normally flowed a good percentage of salt water through larger chokes, flowed pipe line oil for a short time through very small chokes, only to die after becoming waterlogged. To restore these dead wells to a flowing status, it was necessary to flow out the accumulated water.

In wells of this type, larger chokes are used to permit the production of water as it enters the well, and in about the same proportion that it exists in the producing formation. The wells stopped flowing through the very small choke because the low producing rate allowed the water to separate from the oil and drop down in the hole. This settling out obviously accounted for the limited production of pipe line oil from a well that normally should show a good percentage of water. In the production of these wells, no attempt is made to use a choke size that would give the well allowable in a certain part of the 24-hour period. It is necessary to find the size that will give a satisfactory flow, and usually such a choke gives the well's allowable in less than 24 hours. In these wells the gas/oil ratio is not a troublesome factor, a condition that gives the operator a free hand in the selection of choke sizes.

Several wells at Conroe ordinarily produce with a very high gas/oil ratio, particularly those completed high in the producing formation. In several of these wells, the principal operator has experimented until a satisfactory flowing method has been developed. The chief difficulty in producing these wells with an ordinary surface choke lay in the inability to prevent the gas from breaking through the fluid and establishing a prohibitive gas/oil ratio. By shutting these wells in for a short time, the fluid level rises to a point that will permit a fairly satisfactory flow under certain conditions. After the shut-in period, the wells are produced on a very small choke to obtain the accumulated fluid with the lowest possible amount of gas. The small choke allows the fluid to form a seal and prevents the gas from breaking through. The wells are produced in this manner until the gas/oil ratio becomes too high, following which the wells are again shut in. The shut-in period may vary from a few hours to three or four days. When the wells are produced steadily on an average choke, the production is largely gas with a spray of oil, with the fluid level remaining so low that it offers little resistance to the gas flow.

Most of the wells at Conroe are choked to make their allowables in 24 hours, but other groups fill their full daily quotas in 12 hours or less. The well allowables are so much lower than the maximum that could be produced without injury to the producing formation that use of a choke that gives the full production in 12 or 14 hours is not an objectionable practice. A strong well at Conroe will flow its allowable in 24 hours through a choke ranging from 4/64 to 6/64 of an inch.

Paraffin causes some trouble at the choking point on the surface where very small openings are used. Occasional tapping of the choke with a small hammer or wrench has proved effective in dislodging paraffin accumulations. It is because of paraffin that many wells are produced only a part of each day with larger chokes.

Handling Water Wells

Changes in choke sizes above the minimum size that gives satisfactory results has little effect on the percentage of water produced in a group of wet producers. As previously described, a smaller choke causes the wells to produce clean oil for a short time, while the water is settling out and killing the flow. Doubling the size of the choke failed to give a much higher percentage of water in a number of wells that are being flowed only a part of each day.

The origin of water in or with reference to a pro-

Below: Catcher dogs in fully retracted position outside of core passage.

Right: Catcher dogs in fully closed position.

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The Dean Core Drill is constructed so that the driller can open and close the core catcher by pump pressure, at any time, while the tool is in the hole. (A slight lift of drill moves the spline and forces the catcher dogs against the core. Continued rotation of the drill positively forces the dogs through the hardest formation.) This method eliminates all uncertainty as to whether the core has been severed and retained in the barrel while coming out of the well. Pump pressure control of the core catcher is positive, with no chance of losing the core, as the catcher dogs will hold any core in the barrel. Interchangeable rock and drag type heads permit successful coring of all formations. Sizes for drilling holes from 5⅝" to 27" in diameter; with 20-ft. barrels.

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ducing zone largely determines the effect each choke change has on the percentage of water produced. In many wells in representative fields of several producing districts, the percentage of water shows little change with choke variations. Where the water originates near bottom, slightly higher percentages of oil may be obtained by the use of larger chokes. When the water is of intermediate origin and carries a high head, the percentage of water may vary either way. Where "top" water gives trouble, increasing the size of the choke often gives a much higher water percentage.

In the Barbers Hill, Texas, field, larger chokes show a lower percentage of water than chokes that are barely large enough to keep the wells flowing. This increase in oil percentage probably was caused by a reduced resistance in the oil flow, as compared with a greater resistance to flow shown by the oil. The larger opening simply freed the upper oil producing strata more than the lower water strata.

In the Kettleman Hills field, choking practices have been abused by ths use of more and larger flow beans than should have been permitted. Several wells were produced for a long period with four 1½-inch beans or their equivalent, openings that soon damaged the producing formation for a wide radius. The large chokes used in this field did not have an immediate effect on the gas/oil ratio or water encroachment, but much of the damage to the producing zone should be charged to failure to hold an adequate back pressure. High production rates have increased the gas/oil ratio in most of the wells, and particularly in wells that have been permitted to produce with large chokes. The gas cap has spread, causing a channeling effect that has more than doubled the gas/oil ratio in wells that originally fell in the satisfactory classification. This field is one that shows a much lower gas/oil ratio with the application of an efficient back pressure than with an inadequate back pressure. Some of the new wells that are completed in the lower part of the producing formation seem to produce satisfactorily for a short time with large chokes, but they seldom fail to show the influence of gas or water channeling after a long period of overproduction.

Chokes of various sizes have been tried on individual wells in the Ventura Avenue field, and the successful results of back pressure control have been illustrated. The effect of sand and water encroachment have been studied in this field, and results have favored the use of the smallest choke that would give the well allowable in 24 hours. High production rates also tended to increase the gas/oil ratio in wells that already showed a surplus of gas.

In a Gulf Coast field, a worn choke that calipered 19/64 of an inch in diameter was replaced with a new 18/64-inch choke, the original size of the replaced choke. Production with the new and smaller choke fluctuated violently for several days after the change was made. The 18/64 choke was replaced with a 19/64 size, and the well immediately started flowing at an even rate, as it had done with the worn 19/64 choke. This well produced a high percentage of water, and nothing less than a 19/64 choke would give satisfactory results. It had been proved on other occasions in this field that wells producing a high percentage of water were temperamental and would not flow steadily with chokes smaller than the critical or most efficient sizes.

In many settled fields that do not have a high reserve flowing energy, changes in choke sizes must be gradual when a smaller daily production is required. A well flowing through a ⅜-inch choke could not be suddenly changed to flow through a ¼-inch choke without causing a violent fluctuation. Such a reduction in choke sizes should be made by a series of 1/64-inch changes, allowing at least two hours between each change. Such a series of changes would give the formation a chance to adjust itself to the smaller surface opening. The sudden increase in back pressure occasioned by a sharp reduction in choke size is often more than the formation can stand, while wells showing water may be killed outright by rapid downward revisions.

The average Gulf Coast well has a critical, or most efficient, choking point, and any change either above or below that opening causes production to fluctuate. It was very interesting to note recently that a clean well in the Blue Ridge, Texas, field would not respond to a choke smaller than one that had given very good results. A rapid cut-back from a quarter-inch choke to an 11/16-inch choke caused the well to fluctuate violently. Gradual reductions of 1/16 of an inch each gave slightly better results, but even the slower process failed to give the desired results. A study of this well indicated that as the choke size was reduced, the gas broke through and increased the gas/oil ratio. In this particular case the gas apparently was affected less by the increased flow friction than the oil. Reduction in the choke size from one-fourth to 11/16 of an inch caused the gas/oil ratio to rise from 475 to almost 700 cubic feet per barrel, and in addition gave an unsteady flow that was featured by intermittent slugs of oil and gas pockets. With the larger size choke the flow showed a uniform gas/oil ratio and no breaking through of gas.

Gulf Coast wells that produce a high percentage of water are sharply affected by changes in choke sizes. In a new field in Liberty County, Texas, use of a very small choke greatly increased the percentage of water, an unusual development in a well of this type. It was believed that the increased pressure restrained the oil, but failed to offer the same resistance to the water strata. This permitted the water to break through and virtually kill off the oil flow. In a number of Gulf Coast fields, use of very small chokes increases the percentage of oil for a short time; a condition that is followed by water-logging that kills the well.

Choke changes that increase the tubing pressure rarely kill the flow from a producer of any type. It is the decrease in pressure that gives the first sign of alarm. In a clean well, changes in choke sizes that raise the tubing pressure do not always give best results. In a few fields a high back pressure apparently permits the gas to come out of solution and raise the gas/oil ratio, but such producing areas are in the minority. A typical California field produces most efficiently on a small choke. As a general rule, the smallest choke that gives a uniform flow is the one to use in any field. The size may vary from 2/64 to ½ inch, or even larger, but the best size should be determined and used. Where unusual water, formation, gas or mechanical conditions are present, the most efficient choke size may be much smaller or larger than those used in offset wells. Each well presents a separate problem, and for every well at any given time in its flowing life there is a correct choke size.

Unusual Boiler Feed Hook-Up

ENTIRE UNIT MAY BE CARRIED FROM ONE LOCATION TO ANOTHER WITHOUT DISMANTLING

By M. T. HALBOUTY,
Chief Geologist and Petroleum Engineer,
Glenn H. McCarthy, Inc.

ONE of the most complete and unified boiler feed hook-ups in the Gulf Coast has been completed by Glenn H. McCarthy, Inc., and successfully and economically used in the drilling of three wells. The new boiler feed hook-up has been more recently used on Glenn H. McCarthy's wildcat in Jefferson County, Texas, at Little Pine Island Prospect.

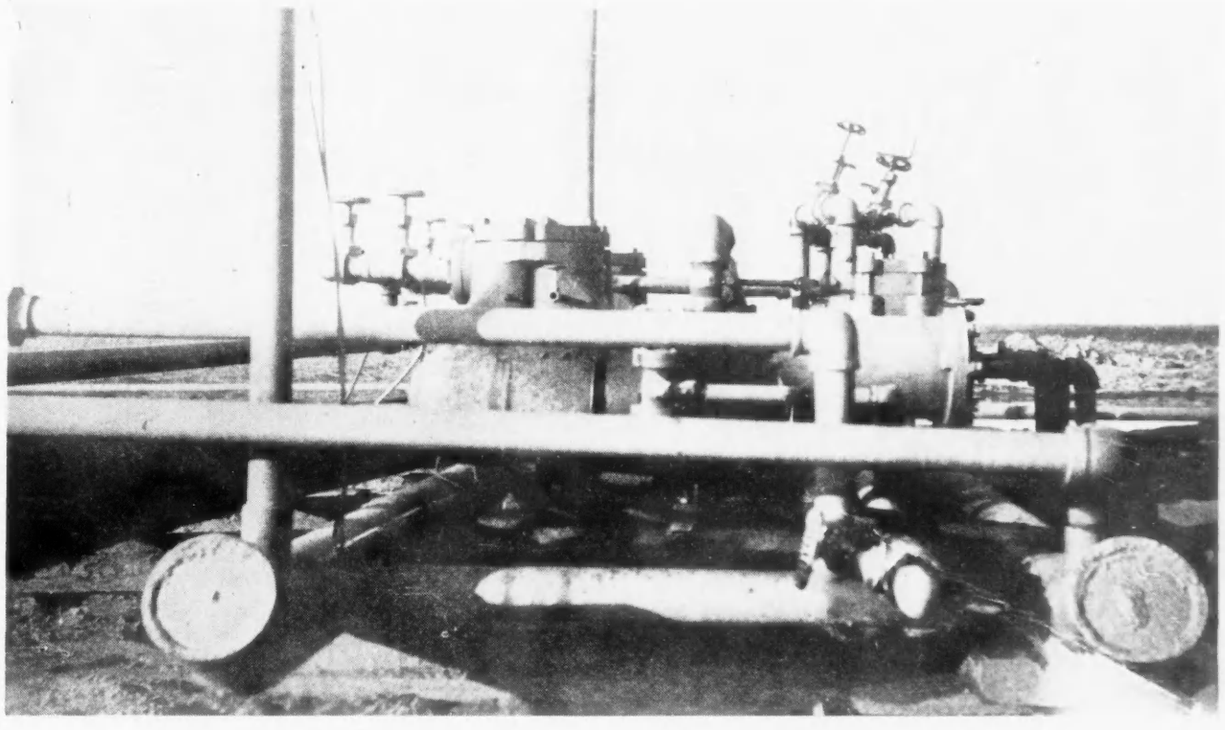
Entirely Unitized

This hook-up is very unique in that it is wholly unitized and can be carried from one location to another in one unit without dismantling. The boiler feed pumps, generators, water heater, water header, manifolds, light poles and exhaust lines are all bolted and connected to two large six-inch drill pipe skids. These skids are reinforced by three-inch drill pipe cross members so as to hold the skids parallel to each other.

Disconnection in 15 Minutes

The entire hook-up can be disconnected from its boiler connections and made ready for hauling in 15 minutes. There are only five one-bolt unions to dismantle and free the entire unit, and three of these unions are on the three boiler feed lines. One of the other unions is on the steam line from the boiler to

Glenn H. McCarthy, Inc., unified boiler feed hook-up, which can be moved from one location to another without dismantling. The welded plug skid to the right is also the water heater.



the pumps and the other on the cold water line to the derrick floor.

There are two 10 x 4½ x 10 slush pumps, one 4AW generator, a coiled water heater, entire pump manifold, water lines, steam lines, exhaust lines and light poles unitized together on the two six-inch drill pipe skids.

This efficient hook-up has been found to save the company considerable time and money, as the heavy unit can be moved complete and also prevents excessive vibration and wear and tear of moving individual equipment.

Fuel Is Saved

All fittings on this new type boiler feed hook-up are of extra heavy quality. This item alone has proved very economical, since in drilling three wells, or 24,000 feet, not one steam leak, water leak or change in connections were made. Every valve is brass and has a 350-pound working pressure. The nipples and ells are of double extra heavy material.

One of the six-inch drill pipe skids is welded and closed at both ends and used as the water header. The boiler feed line intakes are two and half-inches in diameter and are welded into the six-inch water header. The pumps take the water from the pits and into the coils in the water heater, where it is heated to 195°F. which affords a saving of 15 percent on the fuel used. Calculations have proved that the heating of this water before entering the boiler nets a great saving in fuel cost.

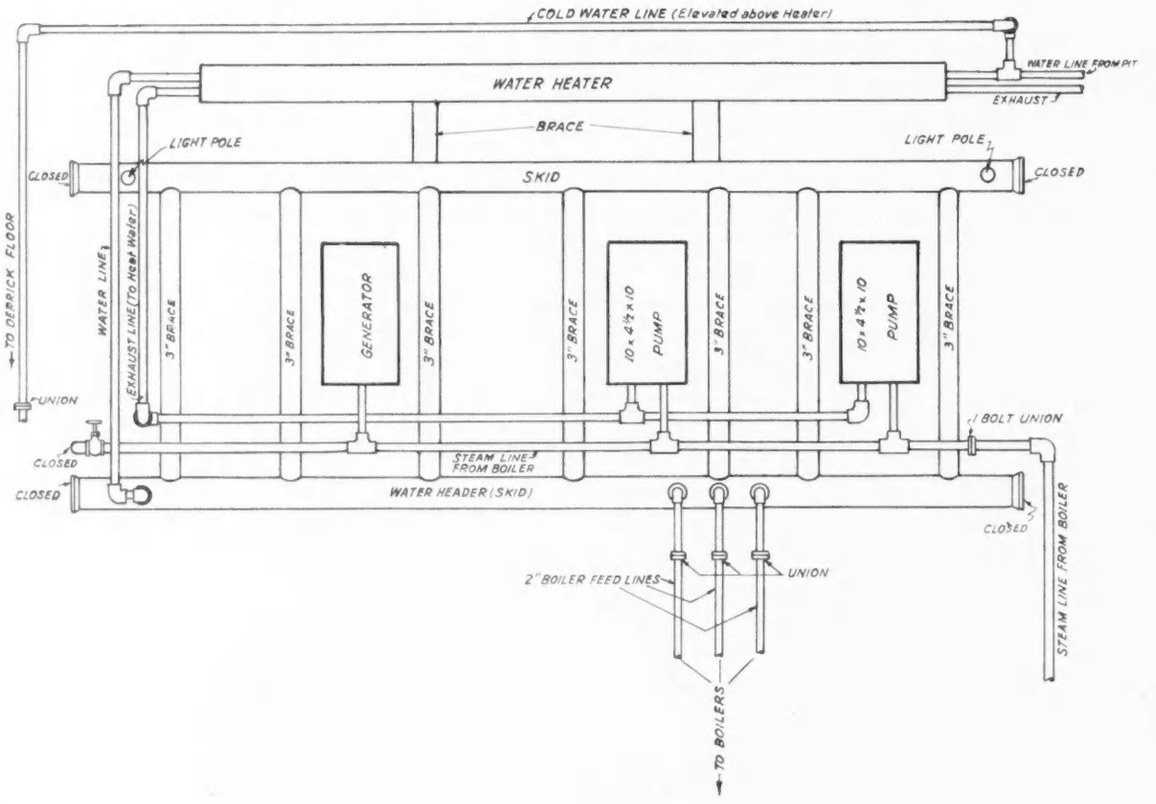
The water passes from the water heater into the six-inch skid (water header), which then flows through the boiler feed lines into the boiler. The steam for the water heater is supplied by the steam introducing from the two pumps. It might be stated that the exhaust from the two pumps furnishes the heat for the water heater. The steam after passing around the coils in the water heater is liberated from the heater.

Can Install Extra Generator

The generator is so connected that it is easily dismantled if necessary. Space has been reserved on the skid for an extra generator.

This entire unit weighs approximately two and one half tons and was assembled by Glenn H. McCarthy, Inc., and has been the interest of engineers of several companies who have visited the well to copy plans of the boiler feed hook-up.

Drawing showing complete details of the unitized boiler feed hook-up. Note that there are only five one-bolt unions to disconnect in order to free the entire unit, and this can be accomplished in 15 minutes. Three of the unions are on the three boiler feed lines.



Economy Shallow Rig

ALL EQUIPMENT MOUNTED ON WHEELS AND ONE TRUCK CAN PULL EASILY

By FLOYD SWINDELL, Staff Writer

THE economic situation that existed in the petroleum industry the past four years brought about a number of new methods and items of equipment and the period probably will go down in the industry's history as having been one of more than the usual number of marked advancements. One phase to which a considerable amount of thought has been devoted is the portability of rotary equipment and economy of operation. As a result many new rigs of unique design have been placed in service. One such rig has been designed and built by Dwight M. Ross and Raymond Miller and now is in use by Ross Drilling Company of Wichita Falls, Texas.

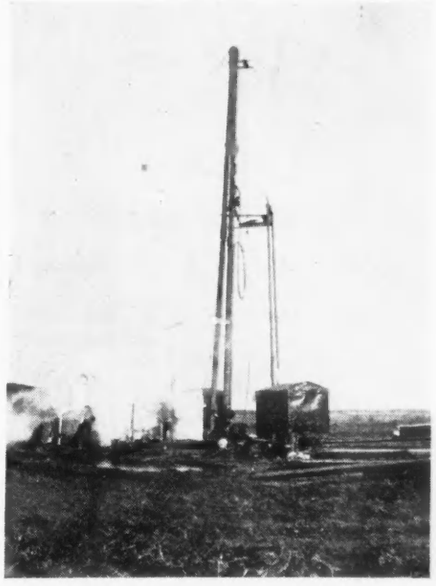
The rig is designed to drill efficiently to 2000 feet, using either three- or four-inch drill pipe. The main drilling unit, which consists of the rotary draw-works, slush pump and electric generator, is bolted to a rigid steel skid 16 feet in length and made of six-inch "H" iron. The unit has an overall weight of 14,000 pounds. The rotary is bolted to one end of the skid as is the outboard bearing for the rotary-drive shaft. Next in line is the draw-works. Immediately behind the draw-works is bolted the slush pump and on the end opposite from the rotary, the steam electric generator is mounted.

The draw-works was made from a cargo winch, twin engine, seven-inch by 12-inch hoist. Suitable brakes were added by bolting on a flange for one brake drum to form a free rolling type brake. As originally constructed, the cargo winch was equipped with a friction type clutch used to engage the hoisting drum. This was replaced by a regular jaw-type clutch and the original gear drive was replaced by a 10-30 chain drive. The short drum shaft was replaced with a longer shaft and to it was added a rotary-drive sprocket acting through a jaw-type clutch. The drum shaft, being a combination line and drum shaft, has a cathead at each end. A reverse valve, located between the steam cylinders, is controlled by a lever at the driller's side.

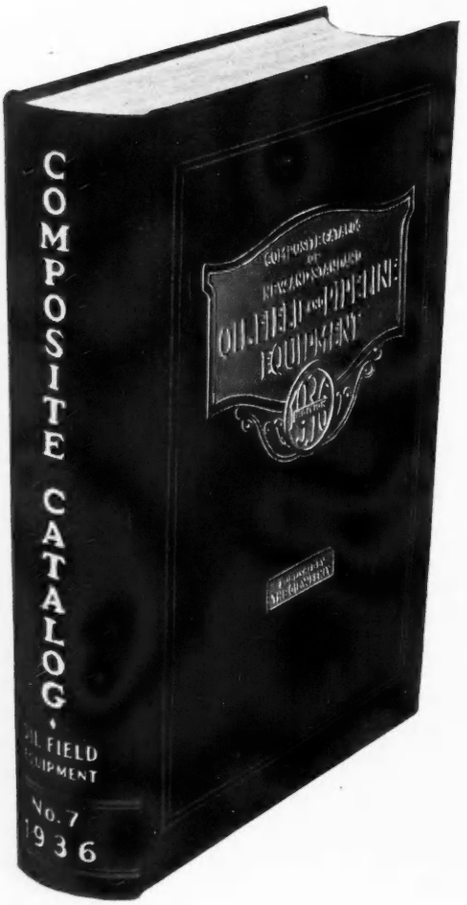
The rotary, constructed from nickel chromium steel, has an 11-inch opening and an extreme diameter of 30 inches. The slush pump is a regular 10-inch by 5⅞-inch by 12-inch steam pump. One 72-horsepower, 190-pound working pressure boiler furnishes all steam power necessary. A 36-inch traveling block and standard swivel and rotary hose make up the other essential parts of the rig. All other equipment is standard in size and design. The main drilling unit on the 16-foot skid, is mounted on a pair of heavy duty solid tire wheels, placed in a balanced position. A trailer hitch is bolted to the end of the skid so that a truck can hook on and pull the entire unit easily. The tool house is regular size, mounted on a two-wheel solid tire trailer, and is provided with a trailer hitch so that it can be hooked on behind a truck. In cases where roads are in reasonably good condition both the drilling unit and the tool house can be pulled by one good truck. All small tools, the traveling block, etc., can be placed in the tool house, leaving only the drill pipe, boiler, mast, water, steam and fuel lines to be hauled by other equipment.

The mast, 70 feet in height, is made from 10-inch casing, clamped together at the center sections with heavy casing clamps. The double-board legs are made from four inch pipe, bolted to the mast about 50 feet above the ground so that the drill pipe is handled in and out of the hole in doubles. The mast and double-board can be assembled and raised in two hours. In rigging up, the owners first set a 14-inch by 14-inch by 14-foot wooden main sill to which is bolted both the drilling unit and the mast. The outfit can be rigged up and ready to drill in less than a 12-hour tour and while drilling uses only a three-man crew. The rat hole is drilled by unbolting the rotary, turning it around and reversing the engine. A back-up and "old pete" are used in breaking joints. Seven and five-eighths and nine-inch hole has been cut in the areas where the rig has seen service. The rig is simple in design, is easy to move and handle and has proved through use its economy of operation and dependability.

Ross Drilling Company shallow rig in operation.



Made for the Busy Man



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Markets Steady

CALIFORNIA CURTAILMENT PLANS ARE ENCOURAGING

DESPITE some unfavorable circumstances, such as the severe winter weather that prevailed throughout most of the United States, the market situation last week continued comparatively bright; and various factors held out promise of continued steady or firm prices.

The weakest spot in the whole market is California, and recent developments there have been of an encouraging nature. Tempted by the promise of higher crude prices if production of the state is reduced to 537,000 barrels daily from the present rate of about 675,000 barrels per day, California producers have been endeavoring diligently to bring about the desired curtailment. It is hoped that the reduction actually will be achieved before the middle of February. The producers would be largely compensated for the smaller production by increases of about five to 20 cents a barrel in crude prices.

The gasoline market in California naturally has continued depressed, pending definite developments with regard to reducing the crude production. The retail gasoline market is particularly weak in Southern California, with prices near the lowest of the depression period. In other portions of the Pacific Coast region, however, better market conditions prevail.

Price Cuts Feared in East

From along the Atlantic coast there came rumors last week that retail gasoline price cutting was impending. The prices had been raised one half to one cent a gallon around the middle of January, following the crude price increases, and some doubt then arose as to whether or not the new retail prices could be maintained. The extreme cold weather of last week throughout most of the country naturally increased the difficulty of maintaining the higher gasoline prices.

Tank Car Market Firm

The tank car market for gasoline continued firm last week, nevertheless, in the Mid-Continent. As far as the East Texas district was concerned, indeed, there was further improvement of prices. In that area the price of third grade gasoline, 62 octane and below, advanced another eighth cent from the prevailing price of a week previously, going to 5¼ cents a gallon.

An important factor in the strength of the East Texas gasoline market was a further decrease of the output of hot material. It was estimated that the amount of hot oil production had declined to 5000 to 7000 barrels daily, as compared with about 10,000 barrels per day a week previously. This new rate of illegal production is about the lowest in the history of the district.

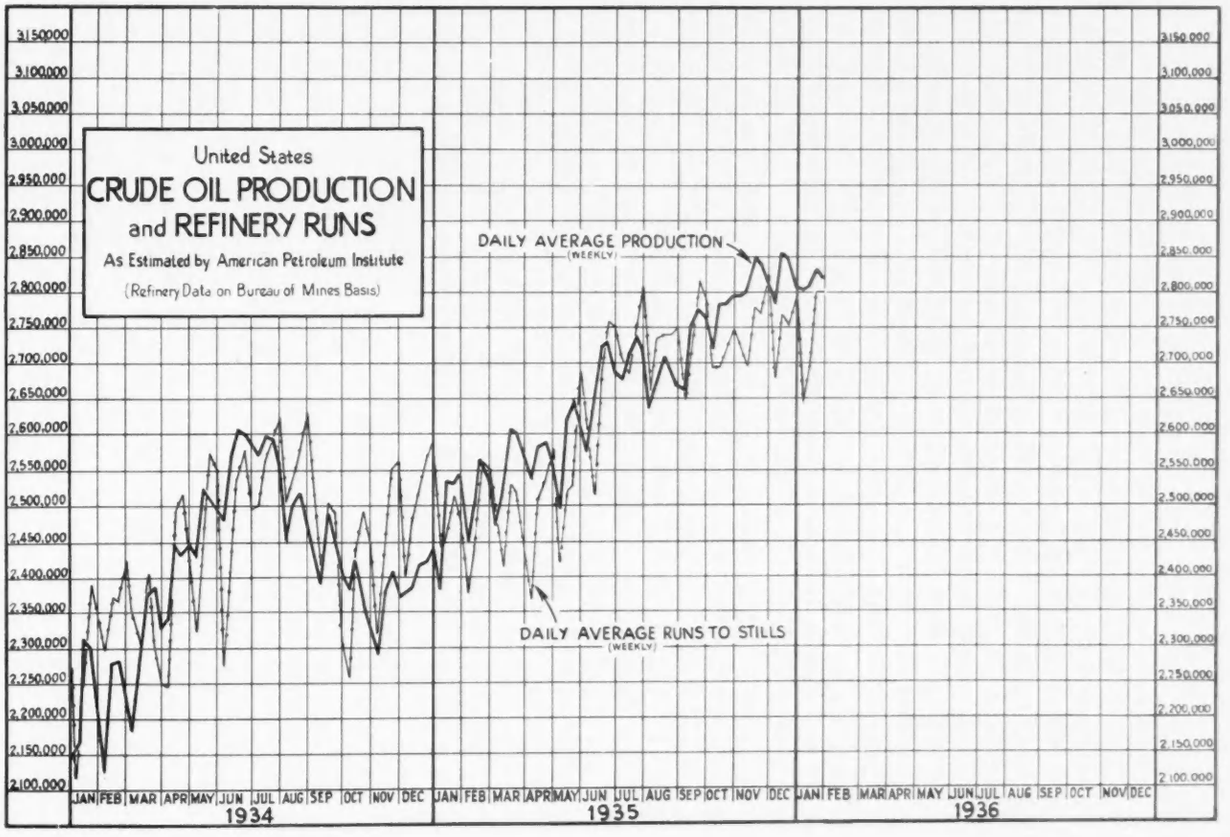
In the Group Three (Oklahoma) region, as in East Texas, the prevailing price of low octane U. S. motor gasoline last week was around 5¼ cents a gallon. The 63-70 octane gasoline meanwhile was 6⅛-cents a gallon.

PRICE IS SHAKY

East Texas plants having trouble supporting price

TYLER.

EAST TEXAS refiners were finding it difficult to maintain their gasoline price structure the past week owing to the accumulation of excessive stocks



of motor fuel. No support of any consequence has been received from out of state jobbers for two weeks because of adverse weather conditions, and intrastate deliveries have been likewise curtailed. Plant owners anticipated early relief from the severe cold spell, and were reluctant to curb their output of gasoline. A number of plants were facing a complete shutdown late last week due to all available tankage being filled. There were 24 plants in operation, according to a week-end check.

Gasoline purchases by the major company buying pool, involving from 175 to 200 cars of federal tendered material each week, has been the backbone of the business enjoyed by the East Texas independent plants. Such purchases command the top price of 5⅛ cents per gallon, exclusive of taxes. Refiners continue to quote this figure on independent offerings of federal tendered gasoline, but only a small volume has been moved. Gasoline supported by state tenders for intrastate points showed a price range of 4⅞ to 5⅛ cents late last week, while motor fuel moving to Texas points via tank trucks varied from 4½ to 5 cents per gallon.

An accurate check on the current volume of illegal crude production in the East Texas field, which is largely based on shipments of refined products made each week, is not possible with large quantities of the finished products being diverted to storage. However, observers report that the hot oil yield remains below 15,000 barrels daily.

Austin.—The Keystone field in Winkler County will have an allowable of 968 barrels daily during February.

The statewide proration order last week provided for only 600 barrels for this field but to effect an efficient rate of flow it was found necessary to increase the allowable by 368 barrels.

East Texas Tank Car Shipments

Week Ending January 26, 1936

PRODUCTS	No. Cars	Estimated Gallons
Gasoline	416	3,379,813
Fuel Oil	222	2,112,078
Casinghead Gasoline	164	1,391,606
Distillate	77	622,371
Gas Oil	48	392,168
Topped Crude	15	141,140
Kerosene	17	135,759
Residuum	1	8,151
Total	962	8,193,668
Total Previous Week	1,091	9,327,622
Intrastate	336	.....
Interstate	322	.....
Coastwise	304	.....
Total	962	.....

PEAK OUTPUT

Natural gasoline output in Panhandle is up

Pampa, Texas.—Natural gasoline production in the Texas Panhandle reached a new peak with an estimated yield of 308,380,590 gallons during 1935. The output during 1934 amounted to 293,015,000 gallons. Operation of stripping plants on natural gas that affords a comparatively low yield of gasoline prevailed on a large scale during the past two years. State laws designed to bring a halt to the waste of about 1,000,000,000 cubic feet of residue gas daily by the 50 plants in the district have been only partially effective. The conservation measure as applied to sweet gas areas became effective last August 1, and in the sour gas belt on October 1.

The district's natural gasoline yield was cut to 18,604,950 gallons in August, or 29 percent below the production reported the previous month. Court attacks on the gas waste measures, and the switching from sweet to sour gas by stripping plants enabled plant owners to restore production near a normal level during the last quarter of the year. Production for December was estimated at 27,830,250 gallons, or 507,780 gallons above the November total. The record monthly yield was attained in December, 1934, when production soared to 29,035,020 gallons.

GASOLINE TAXES UP

Marked improvement in collections is shown

WASHINGTON, D. C.

MARKED improvement of the oil industry is demonstrated by a $10,730,189 increase in gasoline tax collections during the last half of 1935 as compared with the corresponding period of the preceding year, reported this week by the Bureau of Internal Revenue.

In gallonage, the increase was much greater than indicated by the tax gain, the rate in 1934 being 1½ cents per gallon whereas in 1935 it was one cent per gallon.

Receipts from the tax on gasoline during the last half of 1935 reached $97,300,826 against $86,570,637 in the same period of the previous year.

A gain of approximately seven per cent in lubricating oil tax collections also was reported by the bureau, receipts for the period being $13,731,290 against $12,712,621 in 1934, an increase of $1,018,669.

December collections reflected unusually severe winter conditions, receipts from the gasoline tax dropping from $19,769,697 in November to $11,982,864, which was nearly $2,300,000 under the December, 1934, total of $14,261,434. In 1934, collections increased at the end of the year, having been $13,095,318 in November.

Lubricating oil taxes exhibited the same tendency, dropping to $1,873,850 in December from $2,747,026 in November and comparing with $1,864,919 in December, 1934, and $2,013,916 in November of that year.

HARRY C. POTTS, vice president of Kerotest Manufacturing Company, Pittsburgh, held a conference in Fort Worth early last week with Shep. F. Miers and J. D. Isaacks, sales representatives from the Tulsa and Houston district offices, respectively.

Summary of Wells Completed in United States
Week Ending February 1, 1936

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1935	Total Completions this date 1934
Alabama	.....	.....	.....	.....	.....	.....	.....
Arkansas	5	1	.....	4	95	9	23
California	15	12	.....	3	4,370	68	66
Colorado	.....	.....	.....	.....	.....	.....	1
Illinois	.....	.....	.....	.....	.....	.....	4
Indiana	2	.....	.....	2	.....	24	16
Kansas	31	18	2	11	12,208	102	110
Kentucky	.....	.....	.....	.....	.....	.....	12
Louisiana	13	4	3	6	2,912	46	68
Michigan	11	8	1	2	3,085	79	31
Mississippi	.....	.....	.....	.....	.....	.....	4
Montana	.....	.....	.....	.....	.....	10	5
New Mexico	7	7	.....	.....	5,882	23	24
New York	.....	.....	.....	.....	.....	.....	.....
Ohio	38	15	13	10	129	126	149
Oklahoma	50	36	3	11	.....	205	193
Pennsylvania	.....	.....	.....	.....	.....	.....	21
Texas	164	127	3	34	154,646	787	973
Utah	.....	.....	.....	.....	.....	.....	.....
West Virginia	16	4	8	4	35	76	28
Wyoming	.....	.....	.....	.....	.....	4	1
Total this week	352	232	33	87	183,362	1,560	1,729
Total last week	419	271	46	102	375,031	.....	.....
Total this year	1,560	1,026	160	374	1,515,175	.....	.....

Comparison of Permits Granted for New Wells

STATE	Week Ending Feb. 1	Total this Mo.	Total this Year	Total this Date Last Year	1934 Year Total
Arkansas	1	5	5	19	70
California	22	40	40	60	925
Louisiana	12	71	71	64	846
Kansas	38	117	117	140	1,204
Michigan	17	56	56	40	749
Oklahoma	62	192	192	192	2,311
Texas	174	754	754	1,237	10,800
Total	326	1,235	1,235	1,752	16,964

PRODUCTION LOWER

Oklahoma and California responsible for decline

UNITED STATES crude oil production last week, ended February 1, was 18,550 barrels per day lower than in the previous week, but it was still 256,325 barrels per day higher than the amount recommended for January by the Bureau of Mines. The new production rate was 2,815,525 barrels per day.

Responsible for the decline in production last week were decreases for California, Kansas and Oklahoma. Louisiana's production was more than 10,000 barrels a day higher than in the previous week, and that of Texas was up about 3000 barrels.

Encouraging was the 7500-barrel decline in daily production in California, where the new rate was 676,000 barrels per day.

The decline of the California output reflected the determined efforts being made there to bring the state's production down to 537,000 barrels per day. If such curtailment is effected, the California producers will be rewarded with increases of about 5 to 20 cents a barrel in crude prices, according to a promise of a major purchasing company. It is hoped that sharp curtailment of the California production actually will occur before the middle of February. The goal sought would mean about 140,000 barrels a day less production than that of last week.

Kansas production of 137,175 barrels daily last week was about 3000 barrels lower than in the previous week, but still was about 3000 barrels above the Bureau of Mines estimate of demand for January.

Oklahoma last week averaged 497,275 barrels daily, or about 11,000 barrels a day less than in the previous week. The new rate was, however, about 16,000 barrels a day above the indicated daily demand.

Louisiana production last week jumped to 186,950 barrels daily from 176,350 barrels per day the previous week, with the northern portion of the state largely responsible. At the new rate the Louisiana production was about 55,000 barrels per day higher than the amount recommended for January by the federal government.

Texas output rose to 1,038,500 barrels per day from 1,035,300 barrels daily the week before. The new rate was about 21,000 barrels higher than the Bureau of Mines recommendation.

HULL IS SELLING

Tulsa.—J. Arthur Hull, president of J. A. Hull Company, has announced purchase of outstanding interests from five partners and the impending sale of the properties of his company to Sinclair Prairie Oil Company. The Hull Company, a $500,000 corporation, owns developed and undeveloped leases in Oklahoma, Kansas and Texas. Hull's former partners were: Ralph C. Riley, O. J. McCann, Luther H. White and P. F. Cole, all of Tulsa and J. Dewitt Hull of Houston.

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

DISTRICT OR STATE	BARRELS DAILY FOR WEEK ENDING February 1	January 25
TEXAS—		
Texas Panhandle	60,100	59,500
North Texas	56,700	56,800
West Central Texas	25,400	25,400
West Texas	147,000	146,800
East Central Texas	43,800	42,800
*East Texas Field	433,200	432,800
†South Texas	68,200	67,500
†Texas Gulf Coast	204,100	203,700
*Total Texas	1,038,500	1,035,300
OKLAHOMA—		
Oklahoma City	137,725	141,675
Seminole Area	120,800	124,675
Tatums	3,750	3,700
Lucien	10,100	10,500
Fitts	37,825	36,850
Edmond	6,325	8,150
Others	180,750	182,500
Total Oklahoma	497,275	508,050
KANSAS—		
Ritz-Canton	7,150	7,250
Voshell	3,350	3,400
Nikkel-Hollow	4,875	4,925
Sedgwick	6,075	6,100
Oxford	7,275	6,875
Burrton-Haury	12,350	13,100
Lorraine	8,275	8,550
Others	87,825	89,725
Total Kansas	137,175	139,925
LOUISIANA—		
North Louisiana	55,450	46,550
Louisiana Gulf Coast	131,500	129,800
Total Louisiana	186,950	176,350
ARKANSAS	29,825	29,850
CALIFORNIA—		
Long Beach	76,000	76,500
Santa Fe Springs	54,000	54,500
Huntington Beach	42,000	41,500
Dominguez	30,000	31,500
Inglewood	14,500	17,000
Ventura Avenue	41,500	41,000
Seal Beach	7,000	7,500
Midway-Sunset	61,000	61,000
Elwood	16,000	17,000
Kettleman Hills	96,500	98,500
Mountain View	35,000	35,500
Playa del Rey	16,500	16,000
Others	186,000	186,000
Total California	676,000	683,500
MOUNTAIN STATES—		
Wyoming	34,700	35,850
Montana	12,800	12,850
Colorado	4,000	4,100
Total Rocky Mountain States	51,500	52,800
NEW MEXICO	58,000	58,000
EASTERN STATES	100,200	108,500
MICHIGAN	40,100	41,800
*Total United States	2,815,525	2,834,075
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	7,000	10,000
Grand Total, including surreptitious production	2,822,525	2,844,075

† Coastal District of South Texas is included with Texas Gulf Coast.

Crude Runs to Stills; Stocks of Finished and Unfinished Gasoline and Gas and Fuel Oil, and Cracked Gasoline Production, Weed Ended January 25, 1936

(Figures in thousands of barrels of 42 gallons each, reported by American Petroleum Institute)

DISTRICT	Daily Refining Capacity			Crude Runs to Stills		Stocks of Finished and Unfinished Gasoline				Stocks of Gas and Fuel Oil			Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
						Finished										
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Terms. Trans. Pipe Lines	Unfinished in Naphtha Distillates	Total Finished and Unfinished	Gas Oil & Distillate	Residual	Total	Potential Rate	Reporting		Daily Average
		Total	%											Total	%	
East Coast	612	612	100.0	483	78.9	4,239	8,870	933	14,042	3,472	4,134	‡7,606	534	534	100.0	98
Appalachian	154	146	94.8	100	68.5	1,294	933	254	2,481	.....	.....	‡637	79	78	98.7	20
Ind., Ill., Ky.	442	424	95.9	376	88.7	5,181	3,570	782	9,533	1,331	1,815	‡3,146	349	348	99.7	101
Okla., Kans., Mo	453	384	84.8	255	66.4	3,547	2,192	590	6,329	.....	.....	‡3,258	256	228	89.1	72
Inland Texas	330	160	48.5	109	68.1	1,189	70	174	1,433	288	1,231	1,519	148	105	70.9	28
Texas Gulf	680	658	96.8	586	89.1	5,379	250	1,784	7,413	3,331	5,825	9,156	399	393	98.5	121
Louisiana Gulf	169	163	96.4	104	63.8	826	416	169	1,411	1,578	2,551	4,129	77	74	96.1	24
North La.,—Ark	80	72	90.0	38	52.8	234	105	51	390	.....	.....	595	46	44	95.7	7
Rocky Mountain	97	60	61.9	40	66.7	1,040	.....	95	1,135	179	573	752	46	39	84.8	13
California	852	789	92.6	515	65.3	8,702	2,331	1,235	12,268	.....	.....	69,317	280	280	100.0	55
Reported	.....	3,468	89.6	2,606	75.1	31,631	18,737	6,067	56,435	.....	.....	100,115	.....	2,123	95.9	539
Estimated Unreported	.....	401	....	194	....	2,259	918	402	3,579	.....	.....	‡4,639	.....	91	....	36
*Estimated Total U.S. January 25, 1936	3,869	3,869	....	2,800	....	33,890	19,655	6,469	60,014	.....	.....	104,754	2,214	2,214	....	575
*Estimated Total U.S. January 18, 1936	3,869	3,869	....	2,800	....	*32,749	19,465	6,467	*58,681	.....	.....	105,137	2,214	2,214	....	550
U.S.B. of M., Jan., 1935	.....	.....	....	2,434	....	†33,224	†20,042	†5,339	†58,605	.....	.....	†104,174	.....	.....	....	509

*B. of M. basis estimated. †As of January 31, 1935. On March 31, 1935 total stocks Finished and Unfinished gasoline were 66,290,000 barrels. *Revised. ‡Figure for week ended January 18, revised downward in East Coast 433,000; Appalachian 140,000; Indiana, Illinois 83,000; Oklahoma-Kansas 956,000, due to transfer to Unfinished oils. Unreported revised upward 1,612,000 barrels.

NOMENCLATURE

Committee at work in Oklahoma and Kansas

Tulsa.—While it is planned at the next meeting of the nomenclature committee of the Mid-Continent Oil & Gas Association to designate names for all gas pools in Oklahoma and Kansas, the meeting held here January 23 resulted in giving names to six new pools and assigning new production in other areas to nearby established production.

Production in Sections 1, 2, 11 and 12-14n-3e was included under Chandler pool, and the name West Chandler dropped. Production in Sections 4 and 5-14n-3e and 32 and 33-15n-3e has been named Hoyt pool. Production in Sections 27, 28, 33 and 34-19n-3e has been named Stillwater. In southeastern Jackson and northwestern Tillman County production in Sections 31 and 32-1n-19w has been named Tipton pool. New production in the SW NW NE 22-18n-8e will be included in Olive pool, and production in Sections 31 and 32-1n-5w will be included in Cruce pool of northeastern Stephens County. Shallow production in Sections 21 and 29-26n-20e was given the name Vinita pool; production in Sections 30-6n-5e will be included in the Gray pool. Olympic pool was expanded to include all production in Sections 1, 2, 11, 12 and 13-9n-8e; and the West Seminole pool was expanded to include new production in Section 28 as well as old production in Section 29-9n-6e Seminole County. Altus pool of Jackson County was defined to include present production in Sections 2, 3, 10, 11, 14, 15 and 21-1n-20w and Section 34-2n-20w. New production in Section 36-10n-11e will be included in the Gregory pool.

The most important new pool considered during the meeting was the production in Sections 1 and 12-1n-7e, southeastern Pontotoc County, which was given the name Jesse pool. This was discovered by Sledge and Lynch in the Hunton lime and by Continental Oil Company in the McLish formation of the Simpson Group.

The nomenclature committee decided to postpone action on the Mansion area.

Pools which had been named by the Kansas sub-committee and submitted to the general committee were sanctioned as follows:

Barton County—Feist pool, Section 29-18s-11w; Heizer pool, Section 16-19s-14w; and Peter pool, Section 24-20s-11w.

Cowley County—Weathered pool, Sections 28 and 33-31s-3e; David pool, Section 35-30s-4e; and South David pool, Section 2-31s-4e.

Ellis County—Bemis pool, Section 16-11s-17w; Schoenchen pool, Section 17-15s-18w, suggested it be changed to Ruder pool; and Victoria pool, Section 3-14s-17w.

Ellsworth County—Becker pool, Sections 25 and 26-17s-10w .

McPherson and Harvey Counties—Showalter pool, Section 32-21s-1w and Section 6-22s-1w.

Reno County—Haven pool, Section 30-24s-4w; Lerado pool, Section 11-26s-9w, suggested change to name Langdon pool; and Yoder pool, Section 34-24s-5w.

Rice County—Galt pool, Section 8-18s-7w, Rickard pool, Section 22-18s-9w.

Rooks County—Zurich pool, Section 26-10s-19w.

Russell County—Atherton pool, Sections 19 and 30-13s-14w; Boxberger pool, Section 36-15s-15w; Berrick pool, Section 6-15s-13w; Bunker Hill pool, Section 31-13s-12w; Cramm pool, Section 11-14s-15w; Dubuque pool, Section 34-15s-12w; Karst pool, Section 27-15s-14w; Milberger pool, Sections 6 and 7-14s-14w; Big Creek pool, Section 34-14s-14w and Section 36-14s-14w; and East Gorham pool, S½ S½ Section 3 and N½ Section 10-14s-15w.

Sedgwick County—Cheney pool, Section 8-27s-4w.

Stafford County—Riley pool, Sections 19 and 30-22s-11w.

Gas fields discovered in 1935 and new or old oil fields which had not been classified under gas fields were as follows:

County	Location	Field Name
Barton	36-18s-16w	Albert
Ellsworth	5 and 6-14s-9w	Satran
Grant	10-29s-36w	Hickok
Greenwood	32-27s-11e	Severy
Rice	16-18s-9w	Gouldner

Wenger pool, Section 2-20s-1w, and the Ellsworth gas field, Section 29-15s-8w, have been abandoned. The Dickinson field, Section 30-30s-4e, Cowley County, now has additional development in Section 19-30s-4e, and the name has been changed to the Trees pool. Other changes were as follows:

Old Name	Locations	Now Included In
Thode	3, 10 & 11-21s-7w	Wherry
Stone	15-24s-4w	Burrton
Beyer	16 & 21-19s-9w	Chase
North Fairport	9, 16, 20 & 29-11s-15w	Fairport
South Fairport	30 & 31-12s-15w, 25 & 26-12s-16w, 6 & 7-13s-15w	Fairport
Hollow	6, 7, 17, 18, 19, 20, 30-22s-3w	Hollow-Nikkel
Steckel	31-19s-10w	Silica
Isern	12-20s-11w	Silica

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to January 31, 1936)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$0.94	2¢	40—$1.18	1- 9-36
N. and N.-C. Texas	28— .84	2¢	40— 1.08	1- 9-36
Texas Panhandle				
Gray County	34— .86	2¢	40— .98	1- 9-36
Carson-Hutchinson	34— .81	2¢	40— .93	1- 9-36
West Texas				
Ector, Pecos, W'kler, Crane, Upton, Howard and Glasscock	29— .76	2¢	36— .90	1-14-36
West Central Texas	28— .84	2¢	40— 1.08	1- 9-36
East Central Texas	28— .91	2¢	40— 1.15	1- 9-36
East Texas	*1.15			1- 9-36
Texas Gulf Coast				
Anahuac-Dickinson	30— 1.04	2¢	40— 1.24	1- 9-36
Conroe	35— 1.24	2¢	40— 1.34	1- 9-36
Tomball	*1.30			1- 9-36
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 17— .88	2¢	34— 1.22	1- 9-36
South and S. W. Texas	Below			
Refugio (Light)	17— .88	2¢	34— 1.22	1- 9-36
Refugio (Heavy)	* .90			1- 9-36
Saxet	* .90			1- 9-36
Mirando	* .85			1- 9-36
Pettus	*1.25			1- 9-36
Salt Flat	* .97			1-14-36
Darst Creek	* .97			1-14-36
Port Lavaca	* .97			
Plymouth	* .90			12-17-35
Arkansas				
El Dorado (Light) and Rainbow	25— .78	2¢	40— 1.10	1-10-36
El Dorado East Field and Smackover	* .75			1-10-36

DISTRICT	Low Grav.	Dif.	High Grav.	Date
North Louisiana	25—$0.78	2¢	40—$1.10	1-10-36
Urania	* .97			1-10-36
South Louisiana	Below			
Lockport	19— .92	2¢	34— 1.22	1- 9-36
Iowa, Cameron Mds.	Below 19— .82	2¢	34— 1.12	1- 9-36
Rocky Mountain States				
Salt Creek	29— .94	2¢	40— 1.18	1-10-36
Elk Basin	*1.28			1- 9-36
Grass Creek (Light)	*1.28			1- 9-36
Grass Creek (Heavy)	.58			1- 9-36
Big Muddy	*1.11			1- 9-36
Rock Creek	*1.12			1- 9-36
Sunburst	*1.25			1- 9-36
Lance Creek	* .90			1- 9-36
Osage	*1.08			‡
Cat Creek	*1.07			8-25-33
Cut Bank	*1.45			9-29-33
Pondera	*1.05			9-29-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	* .75			9-29-33
Mid-West States				
Lima	*1.25			1-10-36
Illinois	*1.23			1- 9-36
Princeton	*1.23			1- 9-39
Western Kentucky	*1.23			1- 9-36
Pennsylvania				
Bradford	*2.45			1-13-36
Sw. Pa. Pipe Line	*2.17			1-13-36
Eureka Pipe Line	*2.12			1-13-36
Buckeye Pipe Line	*1.97			1-13-36
Corning Grade	*1.42			1-13-36
Michigan				
Central Michigan	*1.12			11- 7-35
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
May 22, 1933	Up 10	.....	.....
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 13	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
August 11, 1933	Up 10	.....	.....
August 24, 1933	.....	Up 10	.....
August 30, 1933	Up 15	.....	.....
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25	.....	.....
January 4, 1935	Up 15	.....	.....
February 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
August 29, 1935	.....	.....	Cut °46
September 6, 1935	Up .5	.....	.....
October 29, 1935	Up 15	.....	.....
November 1, 1935	.....	.....	Up °28
November 18, 1935	Up 15	.....	.....
December 6, 1935	.....	.....	Up °9
January 9, 1936	.....	Up 10	.....
January 13, 1936	Up 15	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and 3⅛ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

* All gravities—flat rate.
° Signal Hill 26 gravity.

CALIFORNIA OIL PRICES

(All gravities above those quoted take highest prices of that field Effective December 6, 1935)

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River Round Mountain	Mountain View	Midway Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-18.9	$.75	$.74	$.73	$.74	$.75	$.71	....	....	$.75	$.71	$.71	$.72	$.73	....	$.65	....	$.65	$.65	$.65	....
19-19.9	.75	.74	.74	.77	.76	.75	....	....	.77	.71	.71	.72	.73	....	.65	$.65	.66	.68	.66	.65
20-20.9	.76	.74	.76	.79	.79	.77	....	....	.78	.71	.73	.72	.73	....	....	.65	.68	.71	.67	.65
21-21.9	.78	.74	.78	.81	.81	.79	....	....	.80	.71	.75	.72	.75	$.73	....	.65	.71	.73	.69	.65
22-22.9	.80	.74	.80	.82	.84	.81	....	....	.81	.73	.77	.72	.77	.73	....	.66	.74	.75	.71	.67
23-23.9	.82	.77	.82	.84	.86	.83	$.79	....	.83	.75	.79	.74	.79	.73	....	.67	.77	.77	.73	.69
24-24.9	.84	.80	.84	.86	.88	.84	.81	F.O.B. Ship	.84	.77	.80	.76	.81	.75	....	.69	.80	.80	.75	.71
25-25.9	.86	.82	.86	.87	.91	.86	.83		.86	.79	....	.78	.82	.77	....	.71	.83	.82	.77	.73
26-26.9	.88	.85	.88	.89	.93	.88	.86		.88	.81	....	.80	.84	.79	....	.73	.86	.85	....	....
27-27.9	.90	.88	.90	.91	....	.90	.88		....	.83	....	.82	.86	.82	....	.76	.88	.88	....	....
28-28.9	.92	.90	.91	.92	....	.92	.90		....	.85	....	.83	.88	.84	....	.78	.91	.90	....	....
29-29.9	.94	.93	.93	.94		....	.93	....	....	.87	....	.85	.90	.86	....	.80	.94	.92	....	....
30-30.9	.96	.95	.95	.95		....	.95	....	....	....	....	.87	.92	.89	....	.83	.97	.94	....	....
31-31.9	....	....	....	.97		....	.97	....	Kettleman Hills			.89	.94	.91	....	.85	.99	....	....	....
32-32.9	....	....	....	.99		....	1.00	....				.91	.96	.93	....	.87	1.02	....	....	....
33-33.9	....	....	....	....	F. O. B. Pipe Line	....	....	$.99	$.95			.93	.98	.95	....	.89	1.04	....	....	....
34-34.9	....	....	....	....		....	....	1.01	....	.97	....	.95	1.00	.98	....	.91	....	....	....	....
35-35.9	....	....	....	....		....	....	1.03	....	.99	....	.97	....	1.00	....	....	....	....	....	....
36-36.9	....	....	....	....		....	....	1.05	....	1.02	....	.99	....	1.02	....	....	....	....	....	....
37-37.9	....	....	....	....		....	....	1.07	....	1.05	....	1.00	....	1.04	....	....	....	....	....	....
38-38.9	....	....	....	....		....	....	....	....	1.08	....	1.03	....	1.07	....	....	....	....	....	....
39-39.9	....	....	....	....		....	....	....	....	1.11	....	1.05	....	....	....	....	....	....	....	....
40-40.9	....	....	....	....		....	....	....	....	....	....	1.07	....	....	....	....	....	....	....	....

WORLD DEVELOPMENTS and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

ROMANIA'S TREND

1935 drilling carries proven reserves westward

Romania's most important oil industry development during 1935 may be said to have been extension of operations westward from older fields, according to information received by THE OIL WEEKLY from Ploesti January 28. This work embraced activity in the area extending from Bucsani to Targoviste in the eastern part of Dambovita province and activity in the area west and south from Gura Ocnitei. This line of exploration was carried on down to the south of the old Aricesti fields. Steaua Romana, Anglo-Irianian Oil Company subsidiary, according to the Ploesti source of information, has the distinction of having been the most successful of Roumania's wildcatters in 1935.

Further to the west, he continues, there have been excellent commercial results in and around Bucsani, Ochiuri, and Viforata. Of these areas, the new field at Bucsani shows the most promise. Steaua Romana's production from Bucsani is about 29 cars per well from five wells (as of January 5, 1936); Unirea Company's production is about 30 cars per well per day from three wells; Colombia Company's production at Bucsani is about 48 cars per day from one well, and Concordia Company is producing about the same amount from one well.

Dambovita province, in which Gura Ocnitei field is situated, drilled 562,985 feet during the first 11 months of 1935, or an average of 51,180 feet per month. Prahova province drilled approximately 395,933 feet during the same period, or a monthly average of 36,000 feet, approximately, practically all of which was in the Boldesti-Scaeni-Harsa district.

Total production in Romania amounted to about 62,580,000 barrels in 1935, or an average of 5,215,000 barrels per month, according to preliminary estimates. Of this, the average monthly production of Boldesti-Harsa district amounted to around 949,000 barrels per month, or about 40 percent of the production from Prahova province, which was 2,320,000 barrels per month in 1935.

Generally speaking, however, production of the Prahova province fields has been on the down grade for a number of years. Originally, oil production in Romania was limited to this province, the main fields of which were Chiciura, Tonesti, Gropi and Bordeni. Later, activities were transferred primarily to the district of Moreni, bordered by such fields as Bana and Piscuri on the eastern boundary of the province.

The older districts of Romania are now becoming exhausted, but about 10 years ago the local industry was characterized by intense activity in the Boldesti field, near Ploesti. Then it gradually shifted in a southerly direction to Harsa, then on to Valea Calugarasca. It was at Chitorani, in the latter district, that Creditul Minier Company drilled a well to 10,258 feet in 1935, establishing the depth record for Europe.

A major portion of oil produced in Romania is being obtained from Meotic sands, generally very prolific and charged with high gas pressures. Unfortunately, the nature of the sand is such that if a well is allowed to flow freely the sand tends within a short period of time to collect around the foot of the tubing and obstruct further recovery of oil.

While Romania still is a country of many independent operators, three majors continue to lead the list of producers. Astra Romana (Royal Dutch Shell Group), holds first place as a producer of Roumanian crude oil, with Steaua Romana running a close second. Romano Americana (Standard Oil Company of New Jersey) stands in third place.

GERMANY'S OUTPUT

1935 yield will be 30 percent more than 1934

Based on figures for the first 11 months of 1935, indications are Germany will produce about 3,000,000 barrels, as compared with 2,189,950 barrels in 1934, an increase of about 30 percent.

Figures released by W. C. Affeld, Jr., of Bremen, showed a total production of 2,736,965 barrels for the first 11 months of the year, or an average of 248,814 barrels per month. While the monthly figure thus far is slightly less than enough to bring the recovery for 1935 up to 3,000,000 barrels, it is expected December's recovery will exceed the average, just as the latter months of 1935 far exceeded the early months of the year.

Hannover fields, located in Germany's salt dome belt, continued to supply a major portion of the nation's crude, being accredited with slightly more than 2,705,000 barrels of the above total for the 11 months of 1935. When final figures are available, Hannover district alone will have produced more oil in 1935 by about 25 percent than all Germany in 1934.

SWISS GEOPHYSICS

M. Vingerhoet, now engaged in drilling a wildcat well at Moll, near the Belgian frontier, is reported doing geophysical work in Switzerland with the idea of drilling another wildcat well there. Our source in Bruxelles facetiously suggests Vingerhoet start making his hole from the top of Jungfrau so as to take in all possible formations in the test.

COLOMBIA'S OIL LAW

Commission is against change at this time

Colombia's commission composed of high executives of the oil industry has decided against modifying the Colombian petroleum law of 1931, holding the law has not been in effect long enough to determine with any accuracy whether its provisions are defective.

The commission was appointed by the minister of industry following objections placed before the government of Colombia by certain foreign oil companies holding concessions in the country. Some of these companies, it is reported, will not take steps to prevent cancellation of their concessions in Colombia, being of the opinion it is very difficult for a producing company to make legitimate profit under the present set-up of Colombian petroleum laws.

An announcement was made recently by the minister of industry that Union Oil Company of Colombia has renounced a large oil concession in the region of Carare because of failure to meet obligatory terms under which the government granted the concession. Payment amounting to 34,000 pesos was given the government by the operator when the concession was renounced. Another concession voided recently was that held in the same region by Compagnie Francaise des Petroles

MOZAMBIQUE WILDCAT

Inyaminga Petroleum Company (1934) is reported drilling below 3400 feet in its wildcat near Inhaminga in Mozambique, formerly known as Portuguese East Africa.

Certain geological reports on the area being tested with American rotary equipment by Inyaminga Petroleum Company have been very favorable for accumulation of oil, although Mozambique has not as yet yielded any commercial production, nor has any of South Africa, for that matter.

CANADA

Based on investigations conducted by G. S. Hume, Geological Survey of Canada, a paper will be issued in a few weeks by Department of Mines of Canada on gas and oil possibilities of the Battleford area of Saskatchewan, according to information received from T. A. Crerar, minister of mines.

When available, copies may be obtained from the Bureau of Economic Geology, Ottawa.

Headway Is Made

[*Continued from Page 8*]

of 75,305 barrels, while the weighted average price will be $1.04, compared to 86 cents last December.

It is felt that a great majority of the producers of the state will agree to abide by the new allotment set for them, although they will lose approximately 3.7 percent of their total daily income. Of course, there will be a few producers who will refuse to cooperate, but the number will be exceedingly small. It is thought the very few who will hold out will not have a total production in excess of 10,000 barrels a day.

The market situation for refined products in California, especially in Southern California, is marking time, pending the settlement of the crude oil production situation. In most of the state, 100 miles or more from Los Angeles, the gasoline price situation is in fair condition. Many small refineries are closed down in the Los Angeles Basin, due to the fact they cannot pay the going price for crude oil and natural gasoline and meet competitive product prices. The producers are refusing to sell their crude at less than posted prices, and refiners cannot afford to pay premiums.

An accompanying table lists each field in the state, the daily average production in December, income from production at present posted prices, the new quotas under weighted average field prices proposed under the new and higher prices promised, and new quotas after the 3.7 percent deductions are made.

Derivation of California Production Quotas Recommended for February, 1936

	DECEMBER			FEBRUARY		
	Daily Production	Average Price	Daily Income	Anticipated Price	Equal Income Production	Proposed Quota
San Joaquin Valley						
Belridge North	10,263	$ .99	10,160	$ 1.25	8,130	7,830
Belridge South	2,336	.65	1,518	.70	2,169	2,090
Buena Vista	22,669	.88	19 950	1.10	18,136	17,465
Coalinga East	14,222	.71	10,098	.78	12,946	12,465
Coalinga West	6,202	.65	4,031	.70	5,759	5,545
Coffee Canyon	1,618	.65	1,052	.70	1,503	1,445
Edison	4,935	.65	3,208	.70	4,583	4,415
Elk Hills	9,710	.83	8,059	.70	11,513	7,765
Fruitvale	6,710	.65	4,362	1.00	4,362	6,000
Kern Front	9,901	.65	6,436	.70	9,194	8,855
Kern River	3,946	.65	2,565	.70	3,664	3,525
Kettleman Middle Dome	217	1.11	241	1.40	172	165
Kettleman North Dome	105,310	1.05	110,576	1.35	80,000	77,025
Lost Hills	4,664	.68	3,172	.75	4,229	4,070
McKittrick	4,108	.65	2,670	.70	3,814	3,670
Midway-Maricopa	38,167	.68	25,954	.78	33,275	32,040
Mount Poso	20,220	.65	13,143	.70	18,776	18,080
Mountain View	35,125	.80	28,098	1.00	28,098	27,055
Poso Creek	1,476	.65	959	.70	1,370	1,320
Round Mountain	6,699	.65	4,354	.70	6,221	5,990
Wheeler Ridge	404	.69	279	.75	373	360
Other Fields	29	.65	195	.70	279	270
Total	308,929	....	261,080	....	258,566	250,485
Coastal						
Capitan	1,800	1.00	1,800	1.25	1,440	1,385
Elwood	16,038	1.05	16,840	1.35	12,474	12,010
Santa Barbara	1,978	.65	1,286	.70	1,837	1,770
Summerland	22	.65	15	.70	21	20
Santa Maria District	3,482	.70	2,437	.75	3,249	3,130
Rincon	1,922	.83	1,595	1.07	1,491	1,435
San Miguelito	1,353	.89	1,218	1.15	1,059	1,020
Ventura Avenue	39,368	.89	35,038	1.15	30,468	29,335
Balance of County	4,119	.70	2,883	.75	3,844	3,700
Newhall	225	.65	146	.70	209	200
San Luis Obispo	328	.65	213	.70	304	295
San Mateo	6	.75	4	.80	5	5
Santa Clara	28	.70	20	.75	27	25
Total	70,669	....	63,495	....	56,428	54,330
Los Angeles Basin						
Alamitos Heights	1,901	.82	1,559	.95	1,641	1,580
Brea-Olinda	9,748	.83	8,091	.96	8,428	8,115
Coyote East	2,649	.73	1,934	.83	2,330	2,240
Coyote West	10,279	.82	8,429	1.00	8,429	8,115
Dominguez	29,346	.95	27,879	1.20	23,233	22,370
Huntington Beach New	26,539	.90	23,885	1.10	21,714	20,910
Huntington Beach Old	16,228	.84	13,632	1.00	13,632	13,125
Inglewood	14,862	.91	13,525	1.10	12,295	11,840
Lawndale	103	.95	98	1.15	85	80
Long Beach	75,305	.86	64,762	1.04	64,272	63,410
Los Angeles	788	.71	559	.75	745	715
Montebello	7,447	.72	5,362	.82	6,539	6,300
Playa Del Rey	14,795	.79	11,688	.93	12,568	12,100
Potrero	376	.95	357	1.15	310	300
Richfield	7,282	.71	5,170	.83	6,229	6,000
Rosecrans-Athens	2,640	1.00	2,640	1.30	2,031	1,955
Santa Fe Springs	54,281	.95	51,567	1.20	42,973	41,375
Seal Beach	9,288	.88	8,173	1.06	7,710	7,425
Torrance-Hermosa	6,688	.75	5,016	.82	6,117	5,890
Whittier	1,163	.71	826	.76	1,087	1,045
Other Fields	386	.70	270	.77	351	335
Total	292,094	....	255,422	....	242,719	232,185
State Total	671,692	....	579,997	....	557,713	537,000

NOTE: The foregoing quotas, complied solely from the standpoint of producers, are derived from application of the principle of relatively equal income for varying amounts of production.

HOUSING COMMITTEE

International Exposition to care for oil men

Tulsa.—A housing committee has been set up by the International Petroleum Exposition to aid oil men in making reservations for hotel rooms during the ninth Exposition here May 16 to 23.

Earl Sneed, a director of the Exposition, has been named chairman and he urges those who have not yet obtained accommodations to write the Housing Committee, International Petroleum Exposition, the price they wish to pay and the reservations desired.

The committee is making an inspection of all hotels in the city and has arranged with the Hotel Association for the hotels to reserve rooms at regular rates during the Exposition.

Due to the large advance interest in the Exposition, several of the larger hotels have no rooms left for the Exposition dates and it will be the duty of the Housing Committee to see that each oil man is taken care of according to his wishes.

During the Exposition the committee will have information booths in each of the leading hotels and it will also publish a directory showing the hotel and room number of each visitor who has made a reservation up to May 10.

ORANGE FREE STATE

Government conducting geological survey of area

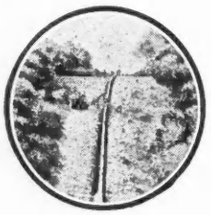
A geological survey is being made by the government of the Union of South Africa in the Bethlehem-Harrismith area of Orange Free State, the first official survey conducted in that region since Dr. A. L. Hall investigated certain oil shows there and published in 1921 a paper titled "On the Occurrence of Oil on Madrid No. 281."

While the survey under way in the fourth sanctioned by the Union of South Africa, the government has only once, THE OIL WEEKLY is informed from Praetoria, indicated a likely location for a wildcat well, and this was not in the Bethlehem district. Dr. A. W. Rogers, who investigated in 1917 the area north of Zwartberg, Cape of Good Hope Province, recommended a test hole be drilled, but no action was taken on his recommendation. Subsequent to his investigations a paper titled "Prospect of Finding Oil in the Southern Karoo" was published by the government.

Prior to the above surveys, a general survey of Union of South Africa was made for the government by E. H. Cunningham Craig in 1913.

Pipe Line Activity

NEW PROJECTS— CONSTRUCTION PROGRESS



RODESSA PIPE LINE

Magnolia is to enter the field immediately

Shreveport. — Magnolia Pipe Line Company will start construction work immediately on a crude gathering system and trunk line outlet for the Rodessa field in anticipation of Magnolia Petroleum Company becoming an active purchaser and producer. The former has purchased site near the oil area for a field station and tank farm, and will build 23½ miles of six-inch welded line south in making a connection with its eight-inch trunk line that delivers Arkansas and Louisiana crudes to Beaumont terminals.

This new outlet for the Rodessa field will have a rated capacity of 13,000 barrels daily, and is slated to be in operation within 45 days. Magnolia Pipe Line Company will erect two large steel tanks at Rodessa.

At present there are four purchasers of crude oil in the Rodessa field, which has two pipe line outlets. The largest is Standard Pipe Line Company which is buying for running 15,000 barrels of oil daily, and the next largest is Gulf Refining Company which is buying 5000 barrels daily.

Besides these two, Pelican Oil & Gasoline Company is buying 1325 barrels daily which it is running to Baton Rouge, Louisiana, for export through Standard's pipe line under the common carrier act, and Arkansas Fuel Oil Company (Cities Service) which is also using Standard's pipe line to run 1250 barrels daily to its Bossier City refinery. This gives the field a total daily output of 22,575 barrels. The field is producing approximately 36,000 barrels daily under the January allowable of 600 barrels daily per well with approximately 60 wells. The outlet on this average is about two thirds of the production allowable.

Pelican Oil & Gasoline Company has secured another tender of 30,000 barrels back allowable on wells completed early in the days of Rodessa, giving it 130,000 barrels back allowable from Rodessa.

Kansas City Southern Railroad has posted a price of 12½ cents per barrel for hauling crude from Rodessa to Shreveport.

NEW LINE FOR FITTS

Tulsa. — Magnolia Pipe Line Company has authorized immediate construction of an eight-inch line into the Fitts field, southeastern Pontotoc County, to handle crude produced and purchased by Magnolia Petroleum Company. The line will extend north from the Fitts field and connect with the company's Oklahoma main line system at Maud station, a distance of about 26½ miles.

This new outlet for the Fitts field will have a rated capacity of 20,000 barrels daily. A single booster station to be erected in the field will be equipped with two reciprocating pumps driven by oil engines. A gathering system will be extended to all sections of the field. Two 55,000-barrel steel tanks will be erected near the field station. The entire project is scheduled to be completed within 60 days.

INCREASE OUTLETS

Western Kansas now has 105,000-barrel capacity

Wichita.—Through the two new pipe line systems recently built into the western part of the state and the looping of two other older systems, Western Kansas counties now have a total pipe line outlet of approximately 105,000 barrels per day. Kaw Pipe Line Company and White Eagle Division of Socony Vacuum Oil Company's cooperative system has a capacity of 40,000 barrels per day; Stanolind Pipe Line Company, 30,000 barrels per day; and Skelly Oil Company, 15,000 barrels per day. The Kaw-White Eagle system has connected 36 pools during January, 1936. Kaw Pipe Line Company is owned by Phillips Petroleum Company, The Texas Pipe Line Company, and Empire Pipe Line Company.

GATHERING LINES

Palestine.—Separate pipe line systems to gather high gravity distillate produced by gas wells in the Cayuga field served by Lone Star Gas Company is being installed by Tide Water Oil Company and Seaboard Oil Corporation, principle producers. About five miles of two-inch gathering line will link the wells yielding large quantities of distillate, and the production will be handled by The Texas Pipe Line Company through its crude line for the account of The Texas Company. Crude production in the field will be increased 1000 barrels to a top allowable of 4720 barrels daily beginning with the February 1 proration period.

Shipment of crude produced in the Long Lake field, southwestern Anderson County, by Tide Water Oil Company and Seaboard Oil Company via tank cars to the coast has been discontinued as result of Gulf Pipe Line Company having started work on a three-quarter mile four-inch line from its main line to connect with the gathering system operated by the Tidal Pipe Line Company. Gulf Pipe Line Company has agreed to purchase the field's 600 barrels daily allowable, paying a flat price of $1.15 per barrel.

ARE GAS WELLS

Court rules Agua Dulce wells are gas producers

Austin.—Wells operated by Clymore Production Company in the Agua Dulce field in Nueces County are classified as gas wells under a decision handed down last week by the Federal Court at Austin.

The Clymore Company had sought to prove that these wells, which produce large volumes of distillate with the gas, were oil wells, and as such would be entitled to produce a certain daily allowable on that basis.

This stand was opposed by the state and United Gas Company, who sought to prevent Clymore from processing the gas in a stripping plant and blowing the residue into the air. In the opinion written by Judge R. J. McMillan the court said:

"Complainant's right to relief hinges entirely upon the question of whether these wells are oil or gas wells. Their contention that they are oil wells is apparently based entirely on the fact that in a separator connected to a choke certain water-white liquid is accumulated, which upon analysis shows to contain various hydrocarbon compounds characteristic of crude petroleum oil. The catching of this liquid is the only thing that could in any possible way be claimed to classify the wells as oil wells.

"It is our opinion, from the evidence, that complainant's wells do not produce any crude petroleum oil in the statutory sense of that term. They produce wet gas, which when acted on by the baffle plates in the separator causes a distillate which complainants claim is oil. It is only by the most strained and technical construction that wells of this character could be classed as oil wells.

"We think it manifest that the legislature in speaking of crude petroleum oil meant a liquid existing in the ground as oil and as such produced from it.

"While we are of the opinion that complainant's gas is wet and has at some point contacted oil, it is most certainly not at this time produced rom an oil stratum, nor is it produced with oil. The permanent injunction prayed for will be denied. . . "

Oklahoma Work Up

SIXTY-TWO NEW TESTS ARE TO BE DRILLED IMMEDIATELY

WEEKLY STAFF REPORT

Tulsa.—Despite sub-freezing temperatures new work in Oklahoma showed an increase of more than 100 percent and completions increased 10 percent over the preceding week. News from the field featured principally dry holes at important wildcat tests. Pontotoc County led the state in new work with 11 first reports; Osage County was second with 10; Carter and Seminole Counties had seven each, to lag slightly behind Creek County with eight; and Okmulgee had four, placing it in fourth position. Other counties which scored in the new-work list were Marshall, Hughes and Tulsa with two each; and Kiowa, Love, Lincoln, Logan, Oklahoma, Payne, Muskogee, Okfuskee, and Pawnee with one each; a total of 62 first reports in 18 counties.

Completions included 36 oil wells with combined initial production of 48,640 barrels, three were wells with combined initial volume of 2,500,000 cubic feet, nine dry holes and two abandoned locations, a total of 50 operations which reached the completion stage and involved 110,043 feet of drilling. This was divided as follows: Four wildcat dry holes, 8673 feet, seven old wells 2581 feet and 39 others, 89,789 feet.

Oklahoma City.—Development in the "Mansion Area" or north Oklahoma City Extension within a city block of the governor's mansion and less than a half-mile from the State Capitol Building, overshadowed all other development in the Oklahoma City area despite the fact that several interesting wildcat tests are in progress. Operators in the older part of the pool, along with their numerous other worries, are having to contend with "tank knockers" who go out at night, break connections on lease storage tanks and permit the oil to run down drainage lines. At convenient places these oil thieves have trucks spotted to pick up the oil from sumps.

On the night of Monday, January 27, oil thieves broke connections on several lease storage tanks belonging to Indian Territory Illuminating Oil Company, permitting approximately 3000 barrels of oil to run out on the ground and into the drainage lines. Early Tuesday morning the company had several trucks and crews out pumping up oil as fast as it could be handled in sub-freezing weather. This practice is gradually being stamped out but many thousands of barrels of oil have been lost through it, largely through seepage into the soil.

New Mansion Area Well

British American Oil Producing Company had another gusher near completion in the "Mansion Area" or north Oklahoma City Extension late in the week when Kersch 1, NE SW SW 23-12n-3w, was flowing at an average rate of 300 barrels per hour through pressure control equipment at 6366 feet, 51 feet below top of the rich Wilcox sand. It will be the ninth producer in the area, which already has an established daily potential of 116,257 barrels, of which it has been allowed to produce 21.5 percent or 24,995 barrels daily during January, 1936.

British American Oil Producing Company's Piersol 5, NW SW SW 23-12n-3w, was drilling below 5450 feet and is next of the drilling wells due to reach the sand. Its Winders 1, SE SW SW 23-12n-3w, was drilling below 4035 feet; Hampton 1, NW NW SW 23-12n-3w, below 3540 feet; and the Highland 1, SE NE SE 22-12n-3w and Russell 1, SE NE SE 22-12n-3w, were rigging up rotary tools.

Phillips Petroleum Company and Black Gold Petroleum Company's Sawyer 1, SE NE NE 22-12n-3w, most northerly drilling well in the extension, was below 5215 feet in deflected hole.

A transaction about which nothing has been definitely made public but which is known to have been consummated placed Barnsdall Oil Company in operating charge of properties of Fairfax Oil Company, of which Frank Russell was president. It was Russell who drilled the first test in the area at Highley 1, SW NW SE 23-12n-3w, completed in November, 1933, for 603 barrels initially from pay at 6649-to 6659 feet, the total depth. This well at first was thought to be producing from Wilcox sand. Geologists now are of the belief that production is coming from sands of lower Pennsylvanian age and that the well is located on the east and downthrown side of a fault. Shortly after completion of this well Russell attempted to drill other locations in the area but was prevented from so doing by an executive order of the then Governor William H. Murray who established a circle of one mile radius with the Capitol Building as a center and proclaimed that no drilling would be done inside of its boundary. Russell was arrested and lodged in jail when he attempted to go ahead in violation of the executive order. It is said, however, that Russell made this move to protect some lease requirements.

Logan County

Stanolind Oil and Gas Company, Amerada Petroleum Corporation and Eason Oil Company had drilled the plugs and were below 5865 feet in Bird (Gragg) 1, SW SW NE 20-18n-4w, one and one-half miles south of the town of Lovell and one-half mile west of the Lovell pool in northwestern Logan County. This test had top of the Viola lime high at 5833 feet and set casing at 5847 feet with total depth at 5860 feet. The test was started in July, 1935, and drilled to 5870 feet, topping Wilcox sand at 5846 feet. At 5870 feet the drill pipe was stuck and the hole cemented back to 5363 feet. Operators whipstocked out and redrilled to 4965 feet where the tools ran back into the old hole. The rig was skidded 50 feet south and a new hole spudded in November. Top of the Viola lime was reported at 5854 feet in the old hole.

Springrose Drilling Company et al's Wright (Cole) 1, SW SW NW 32-15n-1e, thirteen and one-half miles southeast of Guthrie in the southeastern part of Logan County, had resumed drilling and was below 5625 feet. It had Mississippi lime at 5298 feet, Woodford shale at 5317 feet and Hunton lime at 5429 feet. Circulation was lost at 5112 feet, the only major difficulty which has been reported from the test since it was spudded about 45 days ago.

R. H. Pierce et al gave Logan County a new wildcat test when they started work at Kihega 1, SW SW SW 7-17n-1e, less than one-half mile west of the town of Coyle and approximately one mile from the Cimarron River which forms the boundary between Logan and Payne counties at this point. Pits ond cellar had been completed.

Britton-Edmond Area Failure

Mid-Continent Petroleum Corporation's attempt to establish production between the North Britton and Edmond pools in northwestern Oklahoma County resulted in failure during the week when announcement was made of the abandonment of Dahl 1, NE NE NW 8-13n-3w. It topped Checkerboard lime at 5410 feet, Oswego lime at 6128 feet and Viola lime at 6762 feet. Total depth was 7033 feet. One mile to the south Sinclair Prairie Oil Company was drilling plugs with total depth at 6530 feet in Stites 1, SE SE SW 8-13n-3w.

Shell Petroleum Corporation's Watts 1, SW SW SE 22-22n-2w, on the north edge of production in the Polo pool of

western Noble County, drilled to a total depth of 4955 feet, plugged back to 4000 feet and had nothing in the Layton series. It was shut down for orders and probably will be abandoned.

Kay County Leases Sold

Blackwell Oil and Gas Company has completed transaction which involved the sale of a block of 450 acres of leases in the old Otstot pool near Blackwell in western Kay County, Oklahoma. Included in the sale were 18 oil wells with a daily capacity of approximately 300 barrels. David Morgan, Blackwell; Grover Collison, Winfield, Kansas; and Henry Bennett, Augusta, Kansas, were the purchasers at a reported price of $103,000. The new owners will clean the wells out and treat with acid.

South Britton Reclassified

The south Britton pool of northwestern Oklahoma County has been reclassified from Class D to Class C by a formal order of the corporation commission. Although this is a relatively new pool, the wells are small and there is a demand for more oil than could be allowed under the wildcat of Class D provisions which permit only 100 barrels per well per day. Under the order of reclassification it was specified that potentials, based on a four-hour gauge multiplied by six, become effective February 1. A per well minimum of 100 barrels per day was provided. One well, now producing from Wilcox sand, will be plugged back to Simpson lime or dolomite and that horizon produced to its economic limit. The area is described as follows in the order: SE and SE NE 19; SW NW, NW SW and S½ SW 20; NW 29; NE, E½ NW, NE SW, and N½ SE 30, all in 13n-3w.

Binger Test Awaiting Liner

Denver Producing and Refining Company's Sah-Cam 1, C SE SE 33-10n-10w, approximately 1000 feet to the southwest of the discovery well in the Binger pool of northern Caddo County, was shut down at 9850 feet awaiting the arrival of about 1600 feet of 5¾-inch OD special joint casing which will be run as a liner. The 7⅝-inch special joint string was set at 8495 feet, having been run out through a rupture in the 9⅝-inch string at approximately 6330 feet. This latter string was cemented at 7586 feet several months ago in an attempt to test sands at slightly below 8100 feet. The string collapsed and when swaging out was tried it was found that the tools were outside of the 9⅝-inch. A new hole was drilled from the point of collapse to 9850 feet, the present total depth. Operators say they will have an inch of clearance between the OD of the 5¾-inch and the ID of the 7⅝ inch.

The discovery well, Denver Producing and Refining Company's Adah Noe 1, NW SW SW 34-10n-10w, produced at an average rate of 60 barrels per day during the latter part of 1935 and appears to be gradually showing a slight increase. It was drilled to 11,230 feet and plugged back to about 10,000 feet when drill pipe could not be recovered below that point. Production is coming from a sand originally logged between 9908 to 9986 feet, now the deepest producing horizon in the world.

Leasing Continues

SOUTH OKLAHOMA AWAITS OUTCOME OF WILDCATS

Ardmore.—Several major companies continued to expand their already large lease holdings in the southern part of the state as one important wildcat test drilled plugs and two others were drilling by pipe which has been frozen in the hole. The lease and royalty campaign which started over six months ago and reached boom proportions about 60 days ago has subsided to some extent, but all likely acreage in Carter, Love, Jefferson, Stephens and parts of adjacent counties has been taken. Many of the tracts leased do not lie on defined trends and have been bought principally through the heat of the play. Prices for this class of acreage have ranged from $10 to $50 per acre.

Scattered leases were put on record during the week in several counties. Gypsy Oil Company took the E½ SW 11-4s-1w; the S½ SW 13-3s-2e; the NE SW and S½ SE NW 12-2s-3w; a part of the SW of section 27-2s-2w; SE 5-1s-3w; and the N½ NW 36-3s-1w. Carter Oil Company increased its large block in southern Carter County by taking the SW 27 and the W½ NW 34-5s-2w. It is understood that Carter will start a deep test on this block within the next 30 to 60 days.

The Texas Company and J. H. Hudson's Cathey 1, SE NE NE 6-5s-1w, wildcat test within one half-mile of the old Bayou and Southeast Hewitt pool of western Carter County, was drilling plugs late in the week and holding the major attention of those interested in the southern part of the state. The test was drilled and cored to 4157 feet, coring well saturated sand between 4098 and 4118 feet and 4135 to 4157 feet. The 8⅝-inch casing was cemented to 4095 feet and the rig standardized.

Carter Oil Company et al were drilling below 6992 feet in green shale, approximately 900 feet below the whipstock in Williams 1, SW NE SW 27-2s-3w, Simpson discovery well in the old Fox field of northwestern Carter County. When drill pipe could not be recovered below 7060 feet the hole was plugged back to 6850 feet and a whipstock set in open hole at 6089 feet. Big production was obtained through the old hole when total depth was 8088 feet, so the operators have approximately 1100 feet to drill before reaching that point in the new hole. Nine-inch casing was cemented at 4909 feet, six feet above top of the Hunton lime.

One-half mile north and two miles west of the Williams, Phillips Petroleum Company's Tucker 5, SE NE NW 29-2s-3w, was cleaning out with sand pump in an attempt to get on bottom at 3809 feet. This test primarily is exploring shallow sands which may flank the Fox structure. Slightly over a half-mile to the west of the discovery well, Gypsy Oil Company's Fitzgerald 3, SE NW SE 28-2s-3w, was drilling below 2500 feet. It is to go to the Simpson horizon which the discovery well found below 8000 feet.

Sinclair Prairie Oil Company's Stockton 1, SE SE SW 26-6s-2w, 16 miles northwest of the town of Marietta in northwestern Love County, was drilling by lost drill pipe after setting whipstock at 5406 feet, 26 feet above the plug. This important wildcat was drilling at 7165 feet when the pipe became frozen and an attempt to soak free with oil was unsuccessful. The pipe was backed off below the upper float collar and cut from that point to 5100 feet. This probably was the most careful test ever drilled in southern Oklahoma prior to the fishing job. Something over 250 cores have been taken with a wire line core barrel and numerous showings of oil and gas recovered. The last point at which it was shut down for electric logging was at 6900 to 6917½ feet from which interval was recovered one foot of saturated sand.

OKLAHOMA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARTER COUNTY—		
Carter Oil Co., Carter-Hefner 3, sw nw se 9-2s-2w	20	1523
Wirt Franklin, Pierce 3, ne se ne 18-2s-2w	38	2508
Chamberlain et al, Johnson & McGill 2, sw ne sw 17-4s-2w (pb 1850)	*	2070
Shell Pet., Wirt Franklin 58, ne sw ne 8-4s-3w	122	1070
Twin State Oil Co., Cochneuer 2, ne se nw 8-4s-3w	8	1069
CLEVELAND COUNTY—		
Mid-Continent, Butler 1, sw nw sw 7-2n-1e	*	5015
COAL COUNTY—		
Southern Oil, Fish 1, sw sw sw 6-1s-8e	*	1575
CREEK COUNTY—		
Strozier Drlg., Joseph 1, nw sw nw 12-15n-9e (pb 2130)	¶1	3523
Jordan, Bishop 1, sw sw sw 13-17n-8e (otd 2325) (pb 2370)	5	2777
HARMON COUNTY—		
King & Hutcherson, Hollis 1, nw nw sw 20-3n-25w	*	60
HUGHES COUNTY—		
Phillips Pet., Emma 2, se nw nw 8-6n-8e	2784	4154
Manahan Oil, Oliphant "C" 2, sw ne sw 1-9n-8e	480	1760
Oliphant "C" 3, se nw sw 1-9n-8e	195	1724
Sinclair Prairie, Oliphant 2, nw sw se 1-9n-8e	1120	1775
Oklahoma Oil Corp., Rogers 1, ne ne se 11-9n-8e	108	1848
Phillaine, McCaslin 1, se ne ne 11-9n-8e	300	1742
Manahan Oil, Dixon "A" 4, sw sw nw 12-9n-8e	306	1779
Little Simmer 1, ne sw sw 12-9n-8e	960	1796
JACKSON COUNTY—		
Chas. Walker, Clem Tate 1, ne ne nw 16-1s-19w	lcn.	abd.
JOHNSTON COUNTY—		
Equitable O&G et al, Bellsey 1, ne ne sw 12-2s-4e	*	2023
KAY COUNTY—		
Kansas-Oklahoma O. & G., Mason 1, cse se 6-28n-1e	¶¾	999
Mason 2, cne ne 6-28n-1e	¶¾	1002

Company, Well and Location	Init. Prod. Bbls.	Depth
OKLAHOMA COUNTY—		
Sunray Oil, Franklin 1, nw ne nw 1-11n-3w	340	6410
Superior Oil, Sibley 1, nw sw sw 23-12n-3w	11,967	6375
Bernstein et al, Self 1, nw nw ne 25-14n-4w	lcn	abd
OKMULGEE COUNTY—		
Sinclair Prairie, Palmer 2, cnw sw 29-13n-12e (otd 2364)	12½	3314
Klingensmith, Adams 3-A, ne ne sw 35-16n-11e	*	1848
OSAGE COUNTY—		
Ohio Osage Oil, 11, sw nw nw 16-21n-9e	*	2300
Barnsdall Oil, 21 ce¼ se se 18-23n-12e	7	1660
6, cnl se ¼ 11-24n-10e (pb 1886)	12	1890
Peters & Sinclair Prairie, 10, cne ¼ 24-24n-7e	425	2815
PONTOTOC COUNTY—		
Moore, McKoy 7, ne sw sw 28-2n-7e	¶1¾ 4233	4415
Wirick 4, nw sw se 29-2n-7e (otd 4071)	¶2¼ 3537	4343
Woodroof 1, sw nw se 29-2n-7e (otd 4156)	¶4¼ 3637	4397
Skelly, Park College 3, se ne nw 28-2n-7e	¶2 5244	4305
Carter Oil, Hardin 6, nw se sw 30-2n-7e (otd 4120)	3099	4360
Hardin 9, ne se sw 30-2n-7e (otd 4110)	3158	4358
Richards 8, ne ne se 30-2n-7e (otd 4229)	¶2½ 2887	4407
Crosbie, Hardin 3, ne ne ne 30-2n-7e	2325	4318
Mary "F" Oil, White 1, ne nw ne 21-5n-8e	7	965
SEMINOLE COUNTY—		
Vierson, Jones 3, sw ne nw 11-6n-6e	250	2458
Rudman, Bates 7, nw sw ne 13-6n-7e (pb 2836)	38	4174
Helmerich & Payne, Mitchell 1, sw sw ne 15-8n-5e	*	4039
Wood Oil, Burton 2, ne nw sw 28-9n-6e	24	4338
Gypsy et al, Scott Fife 1, cwl ne nw 11-10n-6e	522	4164
Carter Oil, Kiker 1, cw½ nw ne 14-10n-6e	432	4123
Grisso 1, ce½ se nw 23-10n-6e	*	4338
STEPHENS COUNTY—		
Carter & Ring, Arm 9, sw nw ne 26-1s-5w	7	704
Wilkins et al, Crump 7, ne ne ne 15-2s-5w	6	869
WAGONER COUNTY—		
Kroger, Brown 2, cnl sw sw 16-17n-15e	25	1939

*Failures; †Junked; ¶Million cu. ft. gas.

TULSA SHOW

Tulsa.—Up to January 22 exhibitors totaling more than 500 and representing plants in 123 cities of 26 states had designated intention of displaying their products at the International Petroleum Exposition to be held in Tulsa May 16 to 23, according to W. A. Schlueter, chairman of the scientific and technical committee. In addition to the manufacturers' displays scientific displays will be arranged by a committee of more than 20 experts in the prospecting, producing, transportation and marketing divisions of the oil industry, Schlueter stated.

Meetings held in conjunction with the exposition will consist partly of the spring meeting of the American Petroleum Institute, Natural Gasoline Association of America, and the National Stripper Well Association.

A first aid safety conference is expected to take place during the exposition. The committee in charge of this is comprised of G. O. Lockwood of Empire Companies, R. S. Huffman of Oklahoma Natural Gas Company, Kraus Eashart of The Texas Company, Tom Lyttle of Empire Companies, and H. T. Markee, Phillips Petroleum Company.

Snow Handicaps

KANSAS ACTIVITY SHOWS SLUMP DUE TO COLD WEATHER

WEEKLY STAFF REPORT

Wichita.—Kansas operators were handicapped during the week by impassable roads due to heavy snowfall and close to zero temperatures which made operations difficult and in the outlying districts scouts were unable to reach the few operations which had been able to carry on under the adverse conditions. A total of 38 first reports were made of which Barton County had eight; Russell and Reno Counties, five each; Sumner County four; Greenwood, and Cowley Counties, three each; Ellsworth and McPherson Counties, two each; and Kearney, Ellis, Butler, Harvey, Kingman and Rice Counties, one each.

A total of 31 tests reached the completion stage including 18 oil wells rated initially at 12,208 barrels, two gas wells with initial volume of 12,250,000 cubic feet and two abandoned locations. Of the total completed footage three wildcat dry holes accounted for 11,140 feet, two old wells were deepened 1576 feet and the 26 remaining completions involved 70,485 feet, a total of 83,201 feet completed during the week.

Outstanding field developments included a new pool in Rooks County and the extension of the Gorham field in Russell County.

New Rooks Pool

Gillespie et al have given northern Rooks County a new pool with the completion of Lowe 1, NE NE NW 12-6s-18w, slightly over one mile north of Stockton and about 37 miles south of the Kansas-Nebraska line. On a pumping test this week it yielded 60 barrels of 40-gravity oil in nine hours. Production is from Oswald lime topped at 3036 feet and penetrated to 3161 feet, the total depth. It is the northermost oil production in Kansas.

Gorham Pool Extended

Central Petroleum Company extended the Gorham pool of western Russell County one mile to the south during the week when its Benson 1, SE SE SW 9-14s-15w, pumped 210 barrels in 24 hours from Oswald lime.

Chat Showing in Butler Wildcat

National Refining Company's McCullough 1, NE NE SW 1-28s-6e, a wildcat near the town of Leon in southeastern Butler County, topped the Mississippi lime at 2754 feet and from 2780 to 2786 feet had a showing estimated to have a capacity of about 15 barrels per day. It was drilling ahead below 2800 feet. The location is a mile south of old Kramer pool and a mile and one-half north of the Western Kansas Oil & Refining Company's King and Marshall 1, NW NW SW 11-28s-6e, which topped Arbuckle (siliceous) lime at 3044 feet, drilled to 3051 feet and plugged back to 3049 feet, where it made 270 barrels initially during the week ending November 13, 1935. National Refining Company has a block of 1040 acres with the test approximately in the middle. Production possibilities are limited to the east and west by dry holes approximately one-half mile away in each direction. On top of the Mississippi lime it was reported running 20 feet higher than the dry hole to the east and 40 feet higher than that to the west.

New Trego Wildcat

Continental Oil Company has staked location for No. 1, CE½ E½ NW 26-11s-23w, approximately two miles south of the Wakeeney pool in northern Trego County. The Wakeeney pool was discovered by Alma Petroleum Company and Robert McNeeley in May, 1934, but its development campaign has been abnormally slow due to lack of outlet.

Gibson et al's Ruder 1, SW SW SE 8-15s-18w, two locations north and one east of the Oswald lime discovery well in the Schoenchen or Ruder pool of southern Ellis County, topped Oswald lime at 3248 feet and set eight-inch casing on bottom at 3273 feet. The plugs were drilled out and a solid red bed penetrated to 3285 feet, where a showing of oil was encountered. At 3286 feet, the present total depth, a slight increase was reported but it is understood the showing does not indicate a commercial well, and the test will be carried on to Arbuckle (Siliceous) lime. The discovery well, Tom Palmer and Storm King Oil Company's Ruder 1, SW NE NW 17-15s-18w, yielded 499 barrels initially from Oswald lime topped at 3243 feet and drilled to 3429 feet. Two weeks later it was deepened to 3440 feet, and yielded 818 barrels from Oswald and Arbuckle limes.

Helmerich, Payne et al have rig up for No. 1, CSE 28-28s-33w, three miles

west of Santa Fe in central Haskell County. The nearest production of any kind is a gas well about 15 miles to the southwest.

Sinclair Prairie Oil Company has announced location for Henry Hoffer 1, NE NW NW 31-24s-4w, one mile south of the Haven pool in eastern Reno County.

OKLAHOMA MEETING

Ardmore.—The annual meeting of the Southern Oklahoma Oil and Gas Association will be held here on Saturday, February 8 with headquarters at the Ardmore Hotel. Robert S. Kerr, president of the Kansas-Oklahoma division of the Mid-Continent Oil and Gas Association, and Charles F. Roeser, president of the Independent Petroleum Association of America, will be the principal speakers.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Witt, Murray 1, nw nw sw 14-17s-14w	*	3477
Derby Oil, Heing 1, sw nw nw 28-18s-11w	*	3487
Mid-Continent, Matzek 2, sw se se 25-19s-11w	1273	3302
Gypsy, Steckel 4, nw se ne 1-20s-11w	1415	3291
Magnolia Pet., Steckel 3, se nw ne 1-20s-11w	394	3291
BUTLER COUNTY—		
Western Kansas O&R, Furman 1, se sw sw 8-23s-4e	280	2085
Cosmic Oil, Joseph 1, ne sw se 25-24s-3e (pb 2720)	60	2740
Magnolia Pet., Foster 14, cn¼ nw se 21-27s-4e (otd 2387)	*	2633
CLARK COUNTY—		
Olson & Western Oil, Stevens 1, cwl nw nw 21-32s-21w (otd 5471)	*	6801
COWLEY COUNTY—		
Baden, Bush 1, nw sw ne 13-30s-3e	lcn.	abd.
Trees Oil, Sickels 1, ne ne sw 28-31s-5e	*	3097
GREENWOOD COUNTY—		
Lucille Oil, Christy 1, se nw se 12-26s-9e	10	2154
HARVEY COUNTY—		
Inco Oil, Sperling 2, ne ne ne 23-22s-2w	¶5¼	2980
RENO COUNTY—		
Skelly et al, Chesshire 1, nw nw se 3-24s-4w	¶12-257	2370
Olson Drlg et al, Krantz 1, ne ne se 13-25s-5w	*	4128
Magnolia Pet., Harris 1, se sw nw 9-26s-4w	415	4055
RICE COUNTY—		
Continental Oil, Sherman 1, se ne nw 8-18s-7w	*	3662
Vickers Pet., Gouldner "A" 2, nw ne nw 16-18s-9w	737	3243
Phillips & I. T. I. O., Krampe 11, ne sw se 31-19s-10w	lcn.	abd.
Bradley Oil, Wendell 1, nw se ne 32-19s-10w	1861	3298
RUSSELL COUNTY—		
Aylward, Ginter 1, sw se nw 19-12s-15w	758	3055
Palmer Oil, Steinle 4, ne nw sw 22-13s-14w	1509	3277
Texas Co., Anschutz 2, ne nw sw 1-14s-15w	785	3079
Skelly, Kluesner 1, sw sw ne 34-15s-12w	464	3335
STEVENS COUNTY—		
United Prod., Christopher 1, cnw ¼ 14-33s-39w	¶7	2662
SUMNER COUNTY—		
Vickers Pet., Markley 1, sw sw se 28-31s-1w	357	3683
Shawver, Peasel 2, nw nw ne 33-31s-1w	583	3695
Pulse, Buss 1, nw nw nw 12-32s-2e	*	3535
WOODSON COUNTY—		
Spencer et al, Kimball 1, se se nw 19-24s-14e	*	1686
Sheedy et al, Mordmyer 2, cs¼ se nw 19-25s-14e (pb 1463)	350	1483
Klick 2, ce½ e½ sw 20-25s-14e	700	1475

*Failures; †Junked; ¶Million cu. ft. gas.

Winkler County Busy

12 TESTS STARTING; GOOD WELL FINISHED

NORTH & WEST TEXAS OIL CO.

WEEKLY STAFF REPORT

Midland, Texas.—Winkler County gained 12 new tests the past week and also added the largest producer among current completions in the district. Majority of the new locations were assigned to the Sayre, Keystone and North Ward fields and the Kermit section of the Hendrick structure, while three locations were assigned to short term leases situated northwest of the Sayre field.

Magnolia Petroleum Company's John Sealy 2, SWc Section 94, Block A, G. & M. M. B. & A. Survey, provided a surprise development in registering a natural flow of 1005 barrels of pipe line oil on six-hour open casing gauge from sandy-lime at 3110-3118 feet. It is a record producer for the north section of the O'Brien field, which was extended into southern Winkler County in December, 1932, by Sid Richardson's John Sealy 2. Magnolia Petroleum Company inherited the 80-acre lease bearing the new producer when the White Eagle Oil & Refining Company withdrew from Texas, and completed the first producer, a north offset, flowing 243 barrels initial after shot last November at 3138 feet, or 460 feet sub sea. Derrick has been erected to drill Sealy 3 to try for an east extension. Harry Adams Corporation and Hargraves are rigging up to drill John Sealy 1, NWc W½ NW¼ Section 95, a south offset to the big producer, and on a lease assignment previously made by Continental Oil Company.

Two new tests authorized by the Keystone field, includes Sinclair Prairie Oil Company's J. B. Walton 1, NEc NE¼ Section 20, Block 77, P. S. L. Survey, a south offset to the north outpost producer for the area. Sid Richardson Oils, Inc., is starting operations on J. B. Walton-Pure 3, SEc Section 1, Block 3, P. S. L. Survey. Gulf Production Company's Keystone 10, NEc S½ Section 10, Block 3, developed six percent water after being on production several days. It was drilled to 3495 feet, or 541 feet sub sea, using pressure control rotary equipment, and recorded an initial yield of 628 barrels of 33.4 gravity oil and 4,626,000 cubic feet of gas.

Unexplored territory situated to the northwest and north of the Sayre field has been assigned three new locations because of approaching expiration of lease contracts. Humble Oil & Refining Company and Tide Water Oil Company are to drill Lum Daugherty 1, SEc Section 20, Block 74, P. S. L. Survey, and the partnership is credited with having made location to drill Leck 1, SWc SE¼ Section 21, Block 74. E. M. Wahlenmaier and Atlantic Oil Producing Company are starting operations on J. B. Walton 1, SEc SW¼ Section 34, Block 74, on lease assigned by the above partnership. Production is required on each of the three sections by mid-April to perpetuate leases. The Texas Company's Daugherty 1, SWc Section 2, Block 74, P. S. L. Survey, is drilling below 2925 feet, and Gulf Production Company's Daugherty 1-A, SEc SW¼ Section 35, Block 74, is drilling by bit at 2787 feet, having logged top of lime at 2734 feet, with an elevation of 2869 feet. Amerada Petroleum Corporation's Daugherty 1, SEc SE¼ Section 35, Block 74, is changing to standard tools at 2800 feet.

Four new locations allocated to the Sayre field consisted of routine offsets to completed and drilling tests. Magnolia Petroleum Company's J. B. Walton 12, SWc SE¼ Section 1 and on the east edge of production in the Sayre field, developed 60 barrels of fluid, estimated 10 percent oil, with 12,100,000 cubic feet of gas when deepened from 2965 feet to 2990 feet. It was originally completed last October as a gasser. The latter concern's J. B. Walton-State 1, located on a line between the Sayre and Keystone areas, was scheduled

WEST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ECTOR COUNTY (North Cowden Field)—		
Stanolind, J. M. Cowden 25	150	4226
HOWARD COUNTY—		
Conoco & Group 1 Oil Corp., G. W. Overton 8	856	2430
Superior Oil Co. (Cal), D. W. Logan 1	*	3375
W. E. Prod. Co., W. I. Scrivner-Pure 3	*	2460
JONES COUNTY—		
N. H. Martin & Son, Dorsey 4	40	1950
PECOS COUNTY (Wildcat)—		
C. W. Richards et al, W. Courtney 4-A	†	1126
PECOS COUNTY (Toborg Field)—		
Stanolind & Conoco, Tippett 7-C	150	488
WARD COUNTY—		
Atlantic & Penn Oil Co., Bennett 6-B	132	2590
California Co., B. D. Durgin 37	23	2535
Gulf, Hutchings 48	236	2786
Hutchings 49	532	2782
Shell, S. S. Owens-Sloan 4	570	3047
WINKLER COUNTY (Kermit Field)—		
Fox-Butler & Jefferies, Brown-Altman 3	¶10	3196
WINKLER COUNTY (Keystone Field)—		
Crafton Oil Co.-W. A. Moncrief, J. B. Walton 1	240	3500
WINKLER COUNTY (Gulf-O'Brien Field)—		
Magnolia, John Sealy 2	4020	3118
WINKLER COUNTY (Sayre Field)—		
Atlantic & J. D. Collett, Hendrick 2-J	689	3020
Magnolia, J. B. Walton 14	510	2890

*Failures; †Junked; ¶Million cu. ft. gas.

to resume drilling with rotary after cementing seven-inch pipe at 3055 feet. Top of brown lime was logged at 2309 feet, with an elevation of 2921 feet.

New locations staked in the Kermit extension of the Hendrick area included Amerada Petroleum Corporation's J. B. Walton 3, NWc NW¼ Section 48, Block 26, P. S. L. Survey, and Humble Oil & Refining Company's Walton 5-A, NEc SW¼ Section 48, Block 26.

W. H. Dunning, Jr., et al's C. Scharbauer 1, SEc SW¼ Section 33, Block 44, T&P Ry. Survey, T-1-N, intermediate test for the north and south section of the Goldsmith field, Ector County, was preparing to mud off 30,000,000 cubic feet of dry gas production at 4058 feet. It is less than 200 feet above the projected oil horizon.

More trouble developed the past week at W. T. Walsh, Harry Adams et al's Averitt 1, first wildcat on the Seminole structure, Gaines County, and operations were halted at 3350 feet. String of tools were lost when a new gas zone was encountered at the above depth. The owners successfully sidetracked a string of tools and bailer at 3132 feet, and lowered seven-inch pipe to 3142 feet. Negotiations are pending for the deepening of E. M. Wahlenmaier and York & Harper, Inc.'s E. H. Jones 1, northwest Gaines County wildcat, after completing original contract at 5000 feet without encountering the lime horizon. Although it is considered structurally low, financial support will likely be given by other lease owners in the area towards deeper drilling in order to obtain the geological information.

NORTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
L. T. Burns & Long, Turbeville 12-D, blk 142	25	1328
Deep Oil Dev. Co.-Lindsay Drl. Co., McCrory 10, lse 4-A	1300	2239
R. O. Harvey et al, A. B. Edwards 1	*	2250
Huggins Oil Co., Ford 8	16	1000
H. M. Kelleher et al, Abercrombie-Taylor 1, sec 1	*	1398
C. B. Long et al, Turbeville 5, blk 156	55	1518
Pet. Prod. Co., Richardson 13-D, blk 1	75	1265
BAYLOR COUNTY—		
Barnsdall, Portwood 3, sec 1280	*	1442
W. P. Morris & Les Spoonts, C. E. Holman 1, sec 110	*	537
COOKE COUNTY—		
J. N. Martin et al, J. C. Talbot 1	30	1615
F. W. Merrick, Inc., Knabe 17	†	275
Knabe 17-A	11	841
Vindicator Pet. Co., J. Walterscheid 3	25	800
JACK COUNTY—		
Geo. H. Imboden et al, J. A. Brown 1, sec 2	*	357
THROCKMORTON COUNTY—		
Consolidated Oil Co.-Pet. Prod. Co., Portwood 2-C	*	1460
WICHITA COUNTY—		
C. B. Bailey et al, Munger 31, sec 30	6	1091
YOUNG COUNTY—		
Banner Oil Co., S. R. Jeffrey 1, sec 55	*	915
C. W. Boller & J. R. Aures, L. F. Gregg 1	*	834
J. W. Culberson et al, W. R. Weaver 2, sec 2950	*	425
Fresno Oil Co., Baldwin 6, sec 20	*	696
D. S. Johnson et al, E. E. Hall 5	100	683
E. E. Hall 6	65	690
Wichita Prod. Co., E. C. Keith 9, sec 267	10	715

*Failures; †Junked; ¶Million cu. ft. gas.

Deep Drilling

PANHANDLE TEST SHOWING NOTHIHG, TWO TO START

Pampa, Texas.—Phillips Petroleum Company's L. M. Hughes 1, Hall County wildcat, was logging lime formation while drilling at 7060 feet late last week, with no oil or gas shows reported since cementing 9⅝-inch casing at 6305 feet. It ranks third among the deep tests heretofore drilled in the Texas Panhandle district, and is seeking production from the Ordovician lime horizon. The company plans to finish up this deep drilling project in the near future, and use the heavy rotary rig in drilling an Ordovician lime test in Wheeler County several miles northeast of the Shamrock field. The Wheeler County test, as announced last week, will be on the G. W. Porter tract, C NE SW Section 35, Block A-8, H&GN Ry. Survey.

The Canyon lime horizon is the objective of two tests to be drilled northwest and southwest of Alma Oil Company's Mollie Low 1, southeastern Childress County wildcat that was abandoned at 8223 feet last December after failing to make a commercial producer from Canyon lime, showing oil and gas at 5633-5653 feet. Alma Oil Company, headed by Robert Watchorn, Oklahoma City, is to renew its quest for production by drilling a second test in northern Cottle County and about seven miles west by south of the original well. Location is on the T. B. Yarbrough tract, near C NW NE Section 546, Block H, W. & N. W. Ry. Survey. R. C. Larkin, G. D. Warr and associates are reported to be making plans to resume drilling on E. A. Gibson 1, C SE SE Section 507, Block H, W. & N. W. Ry. Survey, Childress County, after temporarily suspending work last September at 2590 feet because of lease title difficulties. The latter is about five miles west by north of Mollie Low 1.

Phillips Petroleum Company's L. Gregg 2, NWc N½ NE Section 72, Block 13, H&GN Ry. Survey, an inside location for the north extension of the Osborne field, Wheeler County, pumped 341 barrels initial from granite wash and lime formation at 2074-2102 feet. C. S. Allender et al's J. B. A. Harvey 1, SWc E½ SW Section 67, Block 13, H&GN Ry. Survey, an intermediate test for the two Osborne areas, developed small show of gas at 2140 feet, with an elevation of 2264 feet, and will deepen to the projected oil horizon due above sea level depth.

TEXAS PANHANDLE

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Empire G&F Co., Magnolia Pet. Co. 1-D	726	3056
HUTCHINSON COUNTY—		
J. E. Crosbie, Inc., H. W. Pitts 9	347	3051
Dixon Creek O&R Co., E. Cockrell 6-K	416	3020
Stanolind, E. E. Watkins 6	251	3048
POTTER COUNTY—		
Texas Interstate P.L. Co., McBride Bros. 1	¶45.8	1968
WHEELER COUNTY—		
Phillips Pet. Co., L. Gregg 2	341	2102

*Failures; †Junked; ¶Million cu. ft. gas.

MORE SALT WATER

Conroe salt water wells have increased

Houston.—There have been 10 new wells added to the list of salt water producing wells in the Conroe field, Montgomery County, bringing the total to 80 ending January 15, 1936. The daily average salt water production in the field is approximately 2350 barrels with an accumulative production of 732,100 barrels.

There are 50 wells in the field making salt water from the Conroe sand and 30 wells making water from the Upper Cockfield producing formation. The daily average production for the Conroe sand is 780 barrels, and for the Upper Cockfield sand 1600 barrels.

Humble Oil & Refining Company has approximately 22 salt water wells in the field. Strake Petroleum Company follows Humble Oil & Refining Company with approximately 11 wells.

There are only five rigs operating in the Conroe field at present with a number of wells being worked over to shut off the salt water.

There have been approximately 27 wells in the field which have made a percentage of salt water but when reworked the water was shut off. Humble Oil & Refining Company's Alexander C-1 was completed December 4, 1932, at 5166 feet. The well showed salt water and was reworked on August 8, 1935, and plugged back to 5122 feet and redrilled to a depth of minus 4980 feet. The well is now making no salt water.

DOODLE BUG CASE

Austin.—The Third Court of Civil Appeals last week handed down a decision declaring that "We take judicial knowledge of the scientific fact that there is no virtue whatever in the 'doodle-bug' in locating oil or other substances underneath the earth. It may be regarded as noteworthy that there appears to be no legal literature on the subject."

In a lengthy opinion the court wrote of the peculiarities of the "doodlebug" operators, and his various idiosyncrasies are outlined in detail.

The opinion was written in a case in which an alleged wiggle-stick operator sought to recover part of the value of an oil lease, contending that his work resulted in discovery of the field.

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It is perfectly natural for those who work in outstanding office buildings to take just pride in their surroundings, and it is just as natural for those who work with pumping wells to take pride in the possession of O'BANNON Sucker Rod Sockets and realize satisfaction from their use.

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Seeking Trinity

TWO EAST TEXAS TESTS ARE GOING TO TRINITY HORIZON

WEEKLY STAFF REPORT

Tyler.—Operations are under way on two tests seeking production from the Trinity horizon in the north and west portions of the Woodbine sand belt in East Texas. Spectacular performance of the Trinity at Rodessa field, located on the Louisiana-Texas-Arkansas border, has caused more importance to be attached to this deep oil and gas zone. Under favorable structural conditions it will produce in East Texas, as one of the first projected Trinity tests on the west edge of the Mexia field proved capable of commercial oil and gas production before the hole was junked while running pipe to complete, and last fall a commercial gasser yielding about 75 barrels of distillate daily was completed from the Trinity in the heart of the Cayuga field, Anderson County.

R. L. Peveto, C. N. Housh and E. G. Thompson's C. M. Carr 1, located in northwestern Titus County and about 1½ miles east of Talco, is seeking production in the Trinity in the north end of the Woodbine belt, with contract for a 6200-foot test. It was drilling in Georgetown lime at 4030 feet late last week. Top of this first section of the Lower Cretaceous was originally called at 3780 feet, and later placed at 3962 feet. First Woodbine series was logged at 3436 feet, with an elevation of 370 feet.

Surface pipe was scheduled to be cemented late last week near the 430-foot level on C. F. Lytle et al's J. L. Thompson-Steubenrauch 1, which is seeking production in the Trinity near the west edge of production in the Mexia field, Limestone County.

The Alba structure, southwestern Wood County, was eliminated early last week for production possibilities in the Woodbine when Gulf Production Company's C. D. McCullom 1, NEc 39.6-acre lease, Joseph Simpkins Survey, showed salt water when formation tester was used in sand section at 4381-4405 feet. The test has since been deepened to 4470 feet, with top of Red Beds logged at 4457 feet, and will be carried to the Georgetown lime horizon for geological information. Austin chalk was recorded at 3700-3928 feet, with an elevation of 456 feet. Based on geophysical data the Alba structure had been given top rating among the Woodbine prospects awaiting exploration in East Texas, and exploration work was deferred about six months in order to survey all property lines within the block and perfect titles.

In Freestone County, J. P. Haley, Chas. F. W. Young et al's Jack Eppes 1, near center of 18-acre lease, David Bullock Survey, about 8½ miles southeast of Teague, report show of oil and gas in Woodbine sand at 4556-4561 feet. Operations have been halted pending the arrival of associates from Rochester, New York.

COMPLETIONS DROP

Expected spurt after raise not materializing

Tyler, Texas.—Volume of completions in the East Texas field dropped to 37 the past week as compared to 47 the week previous. This slump is partially due to adverse weather conditions, as the cost of drilling and completing a well is slightly greater during mid-winter. Substantial gain in field work was expected to follow the recent advance in crude price, but operators crossed up the forecast by tapering off current development and have likewise cut down the number of applications for permits to drill.

Independents lead by a wide margin in completing wells each week, having added 25 as compared to 12 for the majors on the current list. Majors are no longer eager to continue heavy expenditures for new wells, and the majority are slow in matching offsets. Humble Oil & Refining Company, largest lease owner, has recorded only six completions since the first of the year. Other leading producers have been less active since the turn of the new year. Marathon Oil Company, which ranks sixth in producing acreage, is operating only one rotary rig, and will restrict drilling hereafter to this single outfit.

CAMP HILL PRODUCER

Palestine, Texas—Sun Oil Company's Carl Rosson 1, near NWc of 110-acre lease, W. T. Davis Survey, Camp Hill field, Anderson County, flowed an average of 17 barrels of oil per hour on three-hour gauge from Sub-Clarksville sand at 5058-5073 feet with production restricted to three-quarters choke on tubing. Working pressure on tubing was 890 pounds and the closed-in casing pressure registered 1020 pounds. Gulf Oil Corporation of Pennsylvania uncovered this field early last year, and has played a lone hand in developing the area as other lease owners anticipate a low crude recovery per acre from both the Sub-Clarksville and Woodbine sands. Sun Oil Company has erected derrick for Rosson 2, NEc of 110-acre lease, to take care of offset production drilled by the discovery company.

Tide Water Oil Company and Seaboard Oil Corporation's Shaw & Cern 4, located

in the north extension of the Long Lake field, Anderson County, was in process of completion as an oil producer last week. Oil saturated sand in Woodbine section was logged at 5338-5347 feet, with an elevation of 301 feet. Derrick has been erected for Shaw & Cern 5, located 933 feet east and 250 feet south of the first well drilled on the 1216-acre tract. Gulf Pipe Line Company has completed a short pipe line extension into the field, and will purchase the proration quota of 600 barrels daily, paying $1.15 per barrel.

In the Cayuga field, Tide Water Oil Company and Seaboard Oil Corporation's J. N. Edens 5, which was completed in July, 1934, as a big gasser at 3912 feet to provide fuel for drilling rigs, has been deepened to oil sand at 4071-4081 feet. The well gauged 133.24 barrels of oil on 24-hour potential test, flowing through eighth-inch choke on tubing.

EAST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Apple & Young, Kangerga 5 (38-ac)	3400	3695
Gant-Garvin & Wegener, Hale 9...	300	3552
Harris 12 (394.58-ac)	275	3619
Hamilton et al, Gambrell 16 (54.070-ac)	3500	3674
Illinois Oil Co., Mayfield-Shell 32 (197.1ac)	750	3838
Magnolia, Tyiska 4 (87.31-ac)	7200	3827
Marathon, Griffin 12 (65.61-ac)	480	3741
Milford Oil Co., Finney 6 (40-ac)	1200	3673
Retsal Drl. Co., J. P. Maxwell 14..	200	3685
J. P. Maxwell 15	480	3671
Riner & Massie, Herring 3 153¼-ac)	480	3550
Sun, Layne 12 (103.7-ac)	500	3633
Pace 30-B (637.45-ac)	100	3808
Union Oil Co., Deason 3 (10-ac)	450	3778
KILGORE AREA—		
Acme Oil Co., L. Givens 3 (3.37-ac)	9600	3664
J. Beren et al, R. Jones 5-B (33-ac)	300	3617
Hurtle Oil Co., Williams 15-B (112.71-ac)	27	3660
Kimberlin & Howse (D. H. Sanford), King 1-B (10-ac)	1200	3455
Wm. C. Leisk et al (Wardell, Rec.), I&GN Ry. 3-A (13-ac)	750	3713
Marcus Oil Co., Clayburn 7 (46-ac)	1500	3682
Midfield Oil Co., Benson 3 (37-ac)	4800	3658
Neversuch Oil Co., Givens 1 (1.13-ac)	7500	3650
P. & S. Oil Corp. et al, Cooper 2, (6.67-ac)	800	3701
Shell, Russell 26 (126-ac)	5000	3704
Sinclair Prairie, King 20-B, Tr 3 (90¾-ac)	5500	3451
Texas Co., Walker 15 (213-ac)	1200	3580
Texas Gulf Prod. Co., Register 4 (10-ac)	5500	3662
Tide Water, Moore 15 (135-ac)	8600	3700
Williams & Lee, Carter 3 (65-ac)	3000	3601
LONGVIEW AREA—		
Arkansas F. O. Co., McKinley 14-A (96.74-ac)	7200	3631
Atlantic, Burnsides 31-A (204-ac)	8800	3544
Burk Roy. Co., TP Ry. Co. 1, blk 51 (3-ac)	8500	3594
Day & Co., B. Victory 6 (40-ac)	2500	3625
C. G. Dunham et al, Foshee 2 blk 15 (3-ac)	2500	3620
C. H. Lyons-Wadley & Neeley, E. O'Byrne 2 (10-ac)	450	3794
Shell, Slaton 19 (123.65-ac)	8800	3587
Stanolind, Whatley 13-B (39.79-ac)	1000	3581
ANDERSON COUNTY (Cayuga Field)—		
E. A. Showers & W. A. Moncrief, H. W. Barton 2	3000	4049
Tide Water & Seaboard Oil Corp., J. N. Edens 5	2500	4081
NAVARRO COUNTY (Powell Field)—		
W. L. Thompson & Sitton, J. W. Pugh 1	20	1182
J. W. Pugh 2	20	1173
GREGG COUNTY—		
G. Killingsworth et al, fee 1	*	3643
HENDERSON COUNTY—		
C. & G. Oil Co., Sterrett 1	*	1800

*Failures; †Junked; ¶Million cu. ft. gas.

Several Extensions

SOUTHWEST TEXAS FIELDS ARE EXTENDED AND NEW AREAS FOUND

WEEKLY STAFF REPORT

San Antonio.—Extension of the Placedo field two miles was the most important of several outstanding developments in Southwest Texas during the past week. The test enlarging the Placedo field is in the deep producing sand. Other Southwest Texas Gulf Coast developments included minor extensions to Saxet Heights and Saxet, and a failure in the Taft field. Another important Southwest Texas development was extension of the North Pettus field one mile or the opening of a new Goliad County field. During the week it was definitely proved that the Clopton well in Starr County had opened a new Rio Grande district gas field.

LARGE EXTENSION

Placedo is enlarged two miles; failure at Taft

Corpus Christi.—An extension of nearly two miles to the deep sand at Placedo, Victoria County, failure of the second well to produce in the Taft field, San Patricio County, and several minor extensions to the Saxet Heights and Saxet field of Nueces County, were among the key happenings in the Gulf Coast sector of Southwest Texas during the week.

Barnsdall Oil Corporation and Felmont Oil Corporation's Pickering and Roos 1, in the east corner of Lot 3, SA & MG Survey, approximately one mile southwest of production, flowed 8½ barrels of 34.8 gravity oil per hour through ¼-inch choke from the 6000-foot sand. It is nearly two miles southwest of the nearest deep producer and about half that distance from the 4700-foot production. It is the third successful completion in the lower horizon.

The well was drilled to 5953½ feet, finding sand from 5934 to the total depth. Casing was set at 5934 feet. Some reports carry the total depth as being corrected to 5950 feet.

A later gauge on the well showed it producing 175 barrels of oil in 24 hours through 3/16-inch choke, showing a tubing pressure of 460 pounds and casing pressure of 1400 pounds.

Placedo now looks like a rather important producing area. Improved sand conditions have been found as drilling is outlining the structure. Likewise, the deep sand may be a blanket proposition, providing considerable new producing area.

Failure at Taft

George E. Smith's J. L. Britton 2, one location east of the discovery well of the Taft field, San Patricio County, is shut down for orders at 4932 feet. It is reported to have shown nothing at the level it was supposed to have logged the Greta sand. The discovery well is bottomed at 4901 feet. Humble Oil & Refining Company's Goodwin 1, north offset to the discovery well had drilled ahead to the sand.

One and one half miles south of this producer, Hiriam Reed et al's (carried by some as Herman Heep) R. Svedlenak 1, northwest corner Lot 1, Section 5, is rigging up to spud. Several miles southeast of this well, Stanolind Oil and Gas Company Floerke 1, Lot 5, Block 17, has been spudded. They will have an important bearing on the future of the area.

Sun Oil Company registered one failure and apparently has another in the southern portion of the Plymouth field, San Patricio County. Edgar 2 is down 5962 feet after tests in the 5900-foot sand failed to develop production. Edgar 1 was abandoned at 6111 feet. Sun Oil Company added one producer and the Plymouth Oil Company two, all in the 5600-foot sand. Magnolia Petroleum Company got the biggest well of the week in the field, that being Corpus Christi Bank 5, which flowed 27 barrels of oil per hour through ¼-inch choke from 5883. It showed 950 pounds tubing pressure and 760 pounds casing pressure. Conroe Drilling Company's E. H. Welder 2-G made a drill stem test at 5895-5903 feet which developed 80 pounds pressure, 1400 feet of oil and 10 feet of salt water in eight minutes. The last four feet was sand. The well was carried to 6065 feet and an electric formation testing device run. It likely will be completed.

Republic Natural Gas Company's Baldwin et al 1, several locations south of production in the Saxet Heights field drilled to 4100 feet, set casing on bottom and perforated at 4080-85 feet, the result being that the well flowed 120 barrels of oil per day through 7/32-inch choke showing 1050 pounds working pressure. The gas/oil ratio is rather high and attempts are being made to lower it. The largest well

thus far completed in the field is J. K. Culton's Baldwin 2, which flowed at the rate of 932 barrels of oil per day through 5/16-inch choke from perforations at 4088-95 feet, casing set to bottom at 4097 feet. The well has a pressure of 400 pounds on tubing and 500 pounds on casing.

Refugio Refining Company's (Clymore) Weil 1, one mile southeast of the field and near the City Limits of Corpus Christi is drilling at 3300 feet. It is a key wildcat and will hold the attention for the next several days.

In anticipation of the field being extended into the city, an order has been passed by the city commission that a bond of $100,000 must be posted before a permit can be obtained for drilling within the city limits.

Another important wildcat is D. H. Hawn's William Shely 1, 3500 feet northeast of the Saxet Heights field. It was ready to spud at last reports.

The hot drilling corner around the Clarkwood townsite is the main interest in the Saxet field at this time. Due to the smallness of the tracts, between 20 and 30 wells likely will be drilled in this immediate sector during the next several months.

Texon Royalty Company's McElroy 2 cored sand at 3997-4002 feet and on a drill stem test from 3994-4002 feet showed 12 fourbles of oil and 25 pounds pressure in 15 minutes. The test is in process of completion. This producer extends the field nearly a quarter mile south and places the entire Clarkwood townsite in the line of production. Likewise, it develops oil production in a sand logged by other wells in the field, but which showed only gas.

Santa Clara Oil Company (Atkins and O'Neil) have moved the rig off Clara Driscoll Sevier 2, west offset to the discovery well of the Clara Driscoll field, but announce that the test will be reworked or another test drilled in the near future. This well drilled to 3915 feet after mechanical troubles prevented successful completion. It flowed at the rate of seven barrels of oil and a like amount of salt water with considerable gas per hour from perforations at 3739-60 feet.

NEW GAS FIELD

Rio Grande Valley gets a new gas producing field

Mission.—John Clopton definitely opened a new Samfordyce trend field in the Rio Grande Valley January 25, when he completed Roos and Bennett et al 3 for an initial flow of about 20,000,000 cubic feet of gas per day through open two-inch tubing. The casing was perforated at 2415-17 feet. Pressures were registered at 1050 pounds on tubing and 1100 pounds on casing.

The well is located 3000 feet from the east line and 750 feet from the south line of Block 6, Clopton subdivision, Porcion 92, one mile north of the Rio Grande and six miles west of Samfordyce field. It is in Starr County.

It topped the sand section at 2461 feet, which lasted to 2626 feet, being broken with a few streaks of shale. The well blew out and ran wild a short time after drilling this horizon. Controlled, it was carried ahead to 4003 feet without finding production, whereupon it was plugged back to 2650 feet and five-inch casing set.

Several miles west of this well, A. J. Weyel's Wardner (Woods) 1, Porcion 84, is running wild at 2040 feet, making considerable gas, a large volume of salt water and frequent rainbows of oil. The formation is believed to be the same as at Samfordyce. This well is only 2000 feet north of the Rio Grande.

In the extreme northern portion of the county, Sun Oil Company's Guerra 10-A, 500 feet north of production in the Cuevitas field, flowed 43 barrels of oil on a four-hour test through one quarter-inch choke. It showed tubing pressure of 70 pounds and casing pressure of 385 pounds. Sand was logged at 2259-76 feet.

In Hidalgo County, Union Sulphur Company is making rapid progress on its American Rio Grande Land & Irrigation Company tests in the Mercedes field. It drilled 5000 feet in eight days after drilling plugs on the surface pipe. The hole is now below 6600 feet. Rig is being set up over the eighth well on the block, that being in Tract 2120, Block 87.

Many Completions

MIRANDO DISTRICT ACTIVE DUE TO SEVERAL FIELDS

Laredo.—Drilling of twin wells in the Seven Sisters field, Duval County, is apparent with the second pair of double producers being completed during the week. A large portion of the field has been proved productive in both the Chernoskey and Government Wells horizons and full development of each is underway. The Chernoskey sand (discovery horizon of the field) is at 2200 feet, while the Government Wells horizon is at 2500 feet.

Atlantic Oil Producing Company's J. F. Welder 10-A, 330 feet from the north line and 988 feet from the east line of Survey 385, cored Chernoskey sand just below 2200 feet, showing oil. It was carried ahead to 2524 feet, making a drill stem test in the Government Wells sand at 2507-24 feet where it developed 2200 feet of pipe line oil in 10 minutes. An electric formation testing device was run and the hole plugged to the Chernoskey sand for completion. As soon as this well is completed, the rig will be skidded 50 feet west for Welder 11-A, twin well to the Government Wells sand, being assured a producer in the second sand.

One mile southwest of the above pair of wells, Al Buchanan and Blanco Oil Company's J. F. Welder Heirs 9-A has set liner and is preparing to complete at 2524 feet, after setting casing at 2510 feet on the Government Wells sand. The well is located 405 feet from the south line and 330 feet from the east line of the southwest one-quarter of Section 385. It is 75 feet north of Welder 6, which was completed in the Chernoskey sand at 2227-37 feet. The well flowed 23 barrels per hour through 3/8-inch choke with 150 pounds tubing pressure and 350 pounds casing pressure.

Santa Clara Oil Company's (Atkins & O'Neil) J. F. Welder 1-A, Section A, Survey 103, 4½ miles south of Seven Sisters and three miles east of Loma Novia, is in process of completion. The well is bottomed at 2921½ feet in the Loma Novia sand with seven-inch casing set at 2911 feet. It topped the sand at 2914 feet and had 6½ feet of sand, the last six inches being shale. On a drill stem test, it showed for some sort of a producer.

Piedra Lumbre field, Duval County, added another producing horizon during the week when Magnolia Petroleum Company's Duval County Ranch Company 6 showed 300 pounds pressure on drill stem test of Cole sand at 1324-31 feet. Casing has been set and preparations are being made to complete.

Loma Novia field continues to provide large producers, there being an even dozen successful completions during the week. Rosan Oil Company's M. C. Hubbard 6, Section 84, flowed 50 barrels an hour through ½-inch choke from Loma Novia sand at 2784-2802 feet. Gilcrease Oil Company and Frank Gravis' J. W. Byland 6, Section 78, flowed 100 barrels per hour through open tubing from sand at 2586-2609 feet. Humble Oil & Refining Company's M. C. Hubbard 1B made an initial flow of 46.41 barrels of oil per hour through ½-inch choke from sand at 2755-74 feet. Others in the field averaged around 25 barrels per hour, several slightly smaller.

Rogers and Rogers' Cuellar 1, Section 117, extended the Loma Novia sand production of the Hoffman field one mile to the south during the week. It logged the Loma Novia sand at 2854-71 feet, the lower several feet being good sand, but the upper portion being rather shaley.

Among the other Mirando District fields to be rather active at this time are the Cole and Lopez areas on the Duval-Webb County line. Magnolia Petroleum Company completed three wells and is finishing a fourth in the Duval sector of the Cole field, while The Texas Company added one producer. Cole Petroleum Company has two active rigs in the field and O. W. Killam has one.

Superior Oil Company of California's A. S. Billings 1, southeast corner Section 7, one mile west of production in the Lopez field, Webb County, is drilling ahead below 2490 feet after failing to develop production in the Mirando sand, regular producer in the field. At 2305 feet, the well showed salt water and an electric formation testing device

was run to determine whether or not the producing horizon had been passed.

The main Lopez field was extended a couple of locations to the west through the completion of Sierra Oil & Royalty Company's A. S. Billings 1-A, Section 113, which flowed 11 barrels of oil per hour through ½-inch choke. It is in sand at 2192-2211 feet. Four other oil wells were finished in the field during the week.

Holland S. Reavis' C. H. Webster 1, one mile east of the deep production in the Carolina-Texas field, Webb County, is drilling below 4500 feet and is headed to the 5000-foot Mount Selman sand. Foster Barnsley's C. H. Webster 5, in the same area, is attempting to sidetrack at 2400 feet after drilling to 3000 feet and failing to drill deeper.

PEARSALL TEST NEAR

San Antonio.—Amerada Petroleum Corporation late in the week was nearing the Austin chalk with Cory and McWilliams 1, wildcat 2¾ miles southwest of production in the Pearsall field, Frio County. The Austin chalk production is expected just below 5250 feet. In the event it fails, the well will be carried ahead to the Buda lime, which is productive in the same company's Smith 1, nearest producer. The Buda production was found at slightly below 5900 feet.

Halff and Oppenheimer 5 is drilling near 1000 feet and Halff and Oppenheimer 6 is drilling below the second string of surface pipe set at 218 feet. Both are Amerada Petroleum Corporation tests.

This particular area is being watched with great interest due to its key position in a new producing district and also due to the fact that it is the first deep Cretaceous production of importance found in South Texas.

One mile west of the 3900-foot Navarro sand production in the field, Thornton Davis et al's Halff and Oppenheimer 1 is making hole at 3500 feet and likely will have the sand over the week end.

Joe Deupree's William H. Russell 1, seven miles south of San Antonio in Bexar County, is bailing some oil and giving promise of opening a new shallow Taylor marl field for the Balcones zone. The well is at 1001 feet with casing set at 980 feet.

Guadalupe and Caldwell Counties have about 20 operations, most of which are searching for crevice production in the Austin chalk.

TULETA HEARING

Austin.—A hearing before the Texas Railroad Commission on the Tuleta field in Bee County will be held at Austin on February 4.

Some operators in the field have protested against the method of allocation currently in use and have asked for a hearing at which to present their views.

Lake Charles.—Nine completions in South Louisiana during the past week added four producing wells with initial production of 2912 barrels. Two of the producers were work-overs at Sulphur.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BEE COUNTY—		
Devonian Oil Co., S. E. Young 2, M. O'Brien sur (Dirks)	350	3838
S. E. Young 3, M. O'Brien sur (Dirks)	350	3841
Texas Co., S. E. Young 17, T. J. Butler sur (Dirks)	450	3937
S. E. Young 22, T. J. Butler sur (Dirks)	500	3959
BEXAR COUNTY—		
N. Anderson, Rudolph Vogt 2, 95-ac tr, Johnson sur (Von Ormy)	*	650
Crouch & Shadrock, J. Barrigam 6, J. Simpson sur (Von Ormy)	3	690
H. B. Starkey, M. McCloskey 1, 1525 ft nl, 150 ft wl of 42.6-ac tr, F. A. Desaque sur	*	803
DUVAL COUNTY—		
Atlantic, Welder 7-A, sec 385 (Seven Sisters)	450	2514
Welder 2-C, sec 591 (Seven Sisters)	650	2506
Continental, Clara Driscoll Sevier 7-A, 2200 ft wl, 2640 ft nl of sec 52, Santa Rosalia grant, 3 mi nw Driscoll field	*	3435
Rodney DeLange, Bishop Cattle Co. 6, sec 76 (Loma Novia)	450	2775
Duval Oil Corp., L. B. Moody 7-B, sec 76 (Loma Novia)	550	2570
L. B. Moody 5-B, sec 76 (Loma Novia	750	2588
L. B. Moody 10-B, sec 60 (Loma Novia)	450	2562
Gilcrease Oil Co. & Frank Gravis, J. W. Byland 6, blk 3, sec 78 (Loma Novia)	2400	2609
Highland Oil Co., M. C. Hubbard 8, sec 72 (Loma Novia)	525	2727
Humble, M. C. Hubbard 1-B, sec 83 (Loma Novia)	1200	2774
Ruiz Est. 8, sec 553 (Loma Novia)	480	2796
T. D. Smith 5, sec 382 (Seven Sisters)	600	2479
Magnolia, Brennan-Benavides 27, blk 396, Hale sub, Arispe gr (Cole)	500	2780
Brennan-Benavides 30, blk 464, Hale sub, Arispe gr (Cole)	550	2797
C. W. Hahl 18, sec 67 (Loma Novia)	350	2632
Rosan Oil Co., M. C. Hubbard 6, sec 84 (Loma Novia)	1200	2802
Teas Co., M. Vela 20, sec 42 (Loma Novia)	360	2704
GOLIAD COUNTY—		
Jane Oil Co. (Diamond Half) Gillette 1, 330 ft nwl and swl of lease, J. Gomez sur, 1 mile e North Pettus field	600	3707
HIDALGO COUNTY—		
Harrison, Davis & Bishop, F. B. Guerra 8, tr 12, Por. 41 (Samfordyce)	500	2771
KLEBERG COUNTY—		
Harry Clark, W. S. Rogers 1, nw corner lot 1, blk 36, KT&I sur, (Kingsville)	*	750
Culberson & Fidelity, Kivlin 1, sw cor lot 4, blk 39, KT&I sur (Kingsville)	*	lcn.
McMULLEN COUNTY—		
Chas. Hall et al, L. Claunch 1, 1300 ft swl, 935 ft nwl of 200-ac tr, M. Hely sur, ½ mi s Calliham	*	1344
W. H. Kennon, H. L. Lark 6, nw corner blk 26, Lark sub, Scrugham sur (Jacobs)	*	1044
MEDINA COUNTY—		
Letro Oil Co., F. B. Forest 1, 1928 ft nl, 1908 ft el sec 69	*	1020
NUECES COUNTY—		
J. K. Culton, H. B. Baldwin 2, Villareal sur (Saxet Heights)	1250	4097
Tom Graham, Flato 1, blk 14, Sheppard Farm Lots (Saxet)	600	4856
Magnolia, J. C. Baldwin 5, BS&F sur No. 165 (Baldwin)	*	4077
Republic Natural Gas Co., Baldwin et al 1, blk 20, Russell Farm Lots, Villareal sur (Saxet Heights)	350	4100
Santa Clara Oil Co., Clara Driscoll Sevier 2, 660 ft w No. 1, Wm. Gamble sur (Clara Driscoll)	*	3915
REFUGIO COUNTY—		
United Prod. Co., W. J. Fox 16, Hews & Brown sur (Fox)	250	5891
SAN PATRICIO COUNTY—		
Magnolia Pet. Co., Corpus Christi Bank 5, sec 24, Taft Farm Lands (Plymouth)	800	5883
L. L. Smith, W. G. Thomas 1, lot 5, sec 6, 3rd addn Taft Farm Lands (Taft)	*	lcn.
Sun Oil Co., M. K. Edgar 1, blk 1, sec 34, 4th addn Taft Farm Lands (Plymouth)	*	6111
J. M. Hunt 5, sec 34, 4th addn Taft Farm Lands (Plymouth)	600	5630
STARR COUNTY—		
John Clopton et al, Roos & Bennett 3, 3000 ft el, 750 ft sl blk 6, Clopton sub, Por 92, opens new field, perf csg 2415-17	¶20	4003
Sun Oil Co., M. Guerra & Sons 10-A, Cuevitas sur (Cuevitas)	350	2276
VICTORIA COUNTY—		
American Liberty & Felmont Oil Dr. E. G. Gray 2, SA&MG sur No. 8 (Placedo)	750	4768
Barnsdall & Felmont, Pickering & Roos 1, SA&MG sur, ab 306, 1 mi sw Placedo production	250	5953
Costa Oil Co., S. E. Wright 1, J. M. Bronson sur (Placedo)	75	4816
Westgate Oil Co., V. Cortez 1, blk 87, Bronson sur (Placedo)	150	4771
Henderson & Pickering 1-A, W. Rupley sur (Placedo)	130	4772
WEBB COUNTY—		
Mills Bennett, Maria Lopez 1, sec 112 (Lopez)	300	2209
O. W. Killam, Ortiz Ranch 2, 1980 ft el, 660 ft sl sec 1805	*	3635
Montour Prod. Co., Maria Lopez 2, sec 112 (Lopez)	300	2211
Maria Lopez 3, sec 112 (Lopez)	650	2216
G. G. Mortimer, Maria L. Lopez 3, sec 112 (Lopez)	500	2225
Sierra Oil & Royalty Co., A. S. Billings 1-A (3) sec 113 (Lopez)	300	2211
Superior Oil Co., W. C. Billings 4, sec 109 (Lopez)	1000	2241

*Failures; †Junked; ¶Million cu. ft. gas.

NEW PETTUS FIELD

Goliad County gets new field or an extension

Beeville.—A new field or an extension of more than one mile to the North Pettus field into Goliad County was provided during the week to feature activity in the Pettus district. A key wildcat was drilling plugs preparatory to final testing.

Jane Oil Company's (Diamond Half) Gillette 1, in the west corner of the lease in Javiano Gomez Survey, Goliad County, flowed 15 barrels of oil per hour through 3/16-inch choke from Pettus sand at 3694-3707 feet, showing pressures of 100 pounds on tubing and 375 pounds on casing. The water level of the North Pettus field is determined at a point higher than the oil production in this new producer, hence the suggestion is that an entirely new producing area has been opened. On the other hand, there are two failures between this field and the new well.

In the Beeville field, Bee County, where one Conroe sand gasser has been completed, George M. Church is reported to have drilled plugs and is preparing to gun perforate casing on Webb-Hearn 1, located 2000 feet southeast of the original well. The casing is set to total depth, which in 5935 feet. It is scheduled to be gun perforated at 5900-14 feet where it showed some oil saturation.

Dirks field provided four new producers during the week, two by the Devonian Oil Company and two by The Texas Company. All are on the S. E. Young lease and are in the 3900-foot Pettus sand. Another producer was finished in the Caesar field. Only a half dozen rigs are running in Bee County fields at this time.

A new Pettus district wildcat which will attract considerable attention is Thompson Drilling Company's J. E. Pettus 1 on the Cabeza Creek prospect in

Goliad County, where Stanolind Oil & Gas Company and John Camp drilled several promising tests several years ago. The well is located 1100 feet southeast of the Stanolind's Pettus 1 and is 750 feet from the Cabeza Creek. The well has been spudded. The first test showed considerable oil and gas, but was abandoned in the Pettus sand just below 4280 feet.

ROYALTY TAX SUIT

Austin.—The Texas Supreme Court has refused a writ of error in the case styled Group No. 1 Oil Company versus George H. Sheppard, state comptroller.

The decision is one of the most important to Texas oil producers that has been handed down in recent years. By refusing the writ the court adopted the decision of the Third Court of Civil Appeals at Austin.

This decision provided that royalty owners are liable to the state for the tax on their share of any oil produced from leases under which they own minerals.

The full opinion in this case was carried in THE OIL WEEKLY at the time it was handed down by the Appellate Court.

DEEP TEST

El Dorado, Ark.—One drilling permit was issued last week by the Arkansas Board of Conservation. This permit was issued to Odell Henson of Texarkana, for Montana Realty Company 1, located 330 feet south and west NEc NW NW 3-17-28, Miller County, for a proposed 6000-foot test on a block of 11,000 acres in which Gulf Refining Company has an interest. The location is about 14 miles southeast of Texarkana.

TEXAS GULF COAST
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ANAHUAC—		
Humble, Grippon 1	684	7085
BATSON—		
Shell, Jordan 2	518	4720
Texas Co., Christian Fee 1 (wo)	200	4265
BIG CREEK—		
Gulf, Davis 66	*	5200
Stamey-Cavalier, H. Hausler 1	*	3404
HASTINGS—		
Stanolind, Guido 3	558	5765
HIGH ISLAND—		
Stanolind, Cade 50	456	6346
HULL—		
Gulf, Phoenix 96 (wo)	260	4260
LIVINGSTON—		
Hawkeye Oil Co., Howard 3	650	4230
Humble, Grandbury 24	307	4211
Owenby-Shell, Pratt 7	315	4222
PICKETT RIDGE—		
Texas Co., Pierce Estate A-9	594	4710
PIERCE JUNCTION—		
Rio Bravo Oil Co., Settegast A-29	570	4108
SOUTH HOUSTON—		
Stanolind, Drilling District 19 (wo)	*	4406
TOMBALL—		
Amerada-Stanolind, Felber 2	400	5569
Humble, Mueller 2	485	5539
Petrich 4	115	5560
Shell, Rudal 3	324	5570
JEFFERSON COUNTY—		
Glenn H. McCarthy, Howth 1, Little Pine Island prospect, T. & N. O. sur, sec 70	*	8015
SAN JACINTO COUNTY—		
Ralph Stern-Gulf, R. B. Love 1, nw of Cold Springs, D. McGee sur.	*	5670

*Failures; †Junked; ¶Million cu. ft. gas.

Oil at Amelia

BEAUMONT APPEARS LIKELY TO GET A NEW FIELD

WEEKLY STAFF REPORT

Houston.—Humble Oil & Refining Company may have been working on the old saying "the third time is the charm" last week when it apparently discovered a new oil field on the Amelia prospect, Jefferson County. Humble Oil & Refining Company went to the bat early in the year and had one strike called when Miller 1 was abandoned at 6470 feet as a dry hole. Second strike was called a month or so later when Humble Oil & Refining Company's Willerton 1 had a similar fate at 6925 feet.

Then fate grooved one over the plate, and Humble Oil & Refining Company's Langham 1 scored at 6778 feet, January 30, 1936.

For the superstitious ones that believe history repeats itself, attention is called to the fact that Glenn H. McCarthy has staked a location two miles north of Langham 1. In retrospect, Glenn H. McCarthy was the party that staked a location (subsequently a producer) two miles north of Humble Oil & Refining Company's discovery well at Anahuac in Chambers County.

Humble Oil & Refining Company's Langham 1 was 6816 feet in sand and shale January 31, 1936. On a drill stem test January 30, from 6778 to 6791 feet the well showed a pressure of 100 pounds in 27 minutes through a quarter inch choke on top and bottom. When the operators broke down four stands of drill stem the well started flowing oil over the fourble board, and was estimated by some making 15 to 25 barrels in five minutes. When the balance of the drill stem was recovered it showed 1000 feet of oil and approximately 50 feet of brackish water. Some are of the opinion that the water was salty and the others are not. After the drill stem test was made the operators cored five feet deeper and recovered oil sand which put the hole down to 6796 feet. At the end of the week the operators were shut down waiting on orders after running an electrical logging device. The gravity of the oil is 30 degrees.

Upon the news of the drill stem test Glenn H. McCarthy, Inc., staked a location for Long 1, which is 330 feet north of the south line and 330 feet west of the east line from the southeast corner of the Bessie M. Longe 160-acre tract in the H. Williams Survey. The well will be located a little over two miles in the northwesterly direction. The operators are moving in a new rig capable of going 15,000 feet if necessary.

The Amelia prospect has been worked by Humble Oil & Refining Company with both torsion balance and reflection seismograph. The company started leasing in the area some time ago and took several town lots at Amelia. On the third attempt in the area, Langham 1 appears as a discovery well.

The prospect has been reported to have over 500 feet of closure and is considered large in size. It is too early to estimate in what direction the play will go, but is likely to go in the northerly or northeasterly direction, according to geophysics.

Since the well showed oil in commercial quantities royalty prices have jumped to $200 and $400 per acre base. All available acreage has been leased around the play. Humble Oil & Refining Company is the major lease holder. North of Humble Oil & Refining Company's block is Stanolind Oil & Gas Company's block which was acquired when the operators took over Yount Lee Oil Company. The Texas Company has considerable acreage in the area as does Tide Water Oil Company.

It is said that Humble Oil & Refining Company is preparing to move four rigs into the Amelia area and have already made location for Broussard 1, which is near the discovery well.

The Amelia area will be drilled at a rapid pace due to the expiration dates of some of the leases. The area will see considerable activity for the next six months and it is expected that a number of other operators will start moving in rigs before Humble Oil & Refining Company completes the four tests now contemplated.

Glenn H. McCarthy abandoned Howth 1, on the Little Pine Island prospect, T.&N.O. Survey, Jefferson County, during the past week at 8015 feet. It is understood another well will be drilled in the area. The well was drilled to 8015 feet, and had several showings of oil. The test is located 466 feet from the north line and 2330 feet from the west line of the T.&N.O. Survey, Section 70, Jefferson County.

Salt Water at Turtle Bay

The second well for Stanolind Oil & Gas Company in the new Turtle Bay field, Chambers County, proved disappointing to the operators when it tested salt water on a production test at 6625 feet.

The well was drilled to the above depth and seven-inch casing set at 6596 feet, after coring oil sand from 6601 to 6618 feet. The well came in flowing 20 barrels per hour through a half-inch choke, 50 percent salt water. The operators at the end of the week were pulling tubing and preparing to plug back to 6611 feet and make another test. The second well for the field is a south offset to the discovery well and is 466 feet from the south and

east lines of a 140-acre tract in the S. Burney Survey.

Humble Oil & Refining Company has completed Grippon 1 in the Anahuac field, Chambers County, at 7085 feet. The well is a south offset to Gulf Production Company's Knowles 2, which was completed some time ago to bring the Gulf Production Company into the field as the fourth operator.

The well was drilled to 7085 feet in sand showing oil, and came in for 28½ barrels per hour through a quarter-inch choke with 1000 pounds on the tubing and 1100 pounds on the casing. The ratio was 515 to 1. The test is located 466 feet east of the west line and 466 feet south of the north line of H.&T.C. Survey, Section 51.

Sun Oil Company also completed White 6 at 7083 feet. It made 32 barrels the first two hours through a quarter-inch choke. Tubing pressure was 1150 pounds; casing pressure 1100 pounds.

In the Dickinson field, Galveston County, Humble Oil & Refining Company's Maco Stewart A-3, 2500 feet southwest of Maco Stewart A-2 and 3500 feet south of Maco Stewart B-3, J. Sellers Survey, was at 8510 feet waiting on cement to set at the end of the week.

The well was carried to 8629 feet, and then plugged back to 8550 feet, where casing was perforated from 8525 to 8530 feet with 33 holes. A drill stem test taken from 8525 to 8515 feet through quarter-inch chokes in 30 minutes, resulted in the well flowing mud, oil, gas and salt water. It was killed and plugged back to 8510 feet.

Humble Oil & Refining Company's Maco Stewart A-6 plugged back from 8440 to 8150 feet and perforated from 8106 to 8135 feet with 30 holes. On a drill stem test from 8108 to 8150 feet through three eighths-inch chokes in 33 minutes the well had a slight blow for nine minutes and 1200 feet of mud was recovered. The hole was then plugged back to 7173 feet.

The same operator has made location for W. H. Wilson 1. It is 466 feet north of the south line and 345 feet east of the west line of lease and 164 feet south of Humble Oil & Refining Company's San Leon 1, in the A. E. Edwards Survey.

Pure Oil Company has made location for Schelor 3. It is 500 feet north and 100 feet east of Schelor 1, in the B. B. B. & C. Survey.

Coast Petroleum Corporation's Maco Stewart A-3 is located 660 feet east of Maco Stewart 1 and 10,800 feet north of the south line of W. Wilson Survey.

Second Well Tops Salt

The second well in the South Houston field, Harris County, to find salt is Stanolind Oil & Gas Company's Drilling District 19, a workover. The well was drilled to 4406 feet in salt after topping formation at 4386 feet. It was originally completed at 4118 feet as an oil producer but started making water and it was decided to take it deeper. The well is in the center of Lot 8, Block 77, in the H.&T.C. Survey, Section 5, in the South Houston townsite.

Glenn H. McCarthy has made location for a wildcat well on the Houston Ship Channel on the Cockburn prospect in Harris County. The well will be known as Houston Ship Channel 1, and is 330 feet south of the north line and 330 feet west of the east line of a 136-acre tract in the R. R. Vince Survey. There have been several dry holes drilled in this area.

Wildcat Running Screen

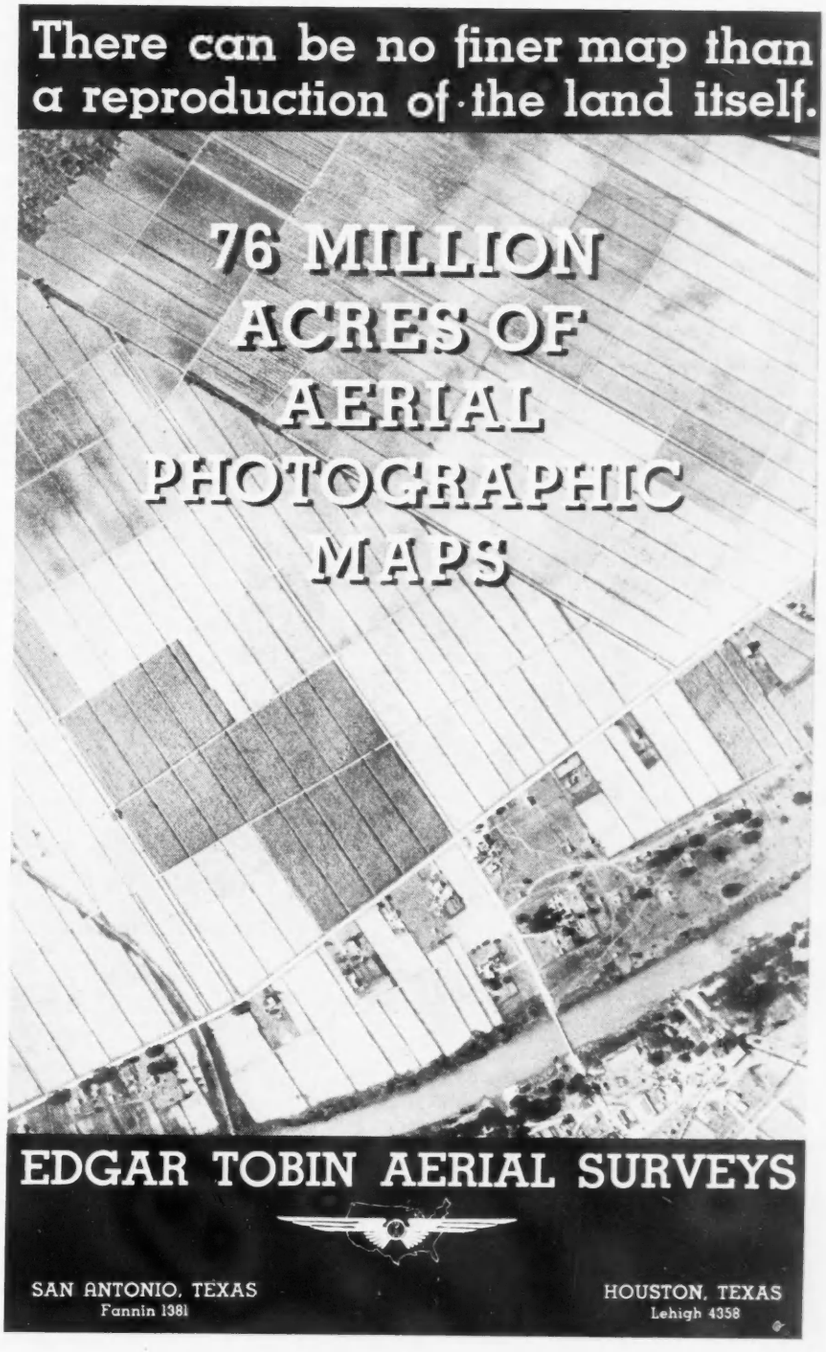
Helmerick & Payne's Hawkins 1, 1¾ miles east of H. M. Smith Corporation's Wadsworth 1, the discovery well for the Sheppards Mott field, D. A. McCarthy Survey, was setting 30 feet of slotted pipe from 7766 to 7793 feet January 31, 1936. The operators will make a production test the coming week. The well has had several sands and shales which showed oil.

The Texas Company completed another producer in the Pickett Ridge field, Wharton County, during the past week when Pierce Estate A-9 came in at the rate of 23½ barrels per hour from 4710 feet. Seven-inch casing was set at 4700 feet.

The operators have made location for Pierce Estate A-11. It is 1000 feet north 73 degrees, 18 minutes and 1000 feet south 16 degrees 42 minutes west from Pierce Estate A-10 in the I. & G. N. Survey, Section 38.

Humble Oil & Refining Company has made location for Cannon 4, on the west side of the Hastings field, Brazoria County. It is 330 feet from the south and 330 feet west of the lease in the H. & T. B. Survey, Section 36.

Stanolind Oil & Gas Company completed Guido 3 during the past week at 5765 feet. The well came in for 211 barrels in nine hours through a quarter-inch choke with a tubing pressure of 700 pounds; casing pressure 700 pounds.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Fields Extended

ENGLISH BAYOU AND OTHERS GET MINOR EXTENSIONS

Lake Charles.—The English Bayou field, Calcasieu Parish, was extended 1000 feet east during the past week. Fohs Oil Company's Castle 9, 1000 feet east of Castle 5, was preparing to perforate casing in oil sands at 7001 to 7044 feet in a hole bottomed at 7079 feet.

The importance of the test is not only its extension of the field eastward but it gives indications of producing from sands that proved dry in two wells located to the north. Castle 9 is approximately 750 feet southeast of Castle 3, which was a dry hole and 1000 feet southwest of Castle 4, which also was plugged.

The well is on the up throw side of a fault, and will add considerable acreage. It is noticeable how well the operators figured the fault in this area.

Castle 9 set seven-inch casing at 7069 feet, after finding a gas sand from 6970 to 6995 feet and the oil sand from 7001 to 7044 feet. Shale with broken sands showing oil was found from 7044 to 7079 feet.

The test is located 1320 feet from the west line and 890 feet from the north line of the NW SW 13-9s-8w.

In the Gillis field, one mile north of the English Bayou field, Union Sulphur Company has made location for Barbee 6, 548 feet south and 387 feet west of the northeast corner of Section 11-9s-8w. Union Sulphur Company's Powell Lumber Company 5 is 1443 feet south and 1020 feet east of the NEc NW NW 12-9s-8w.

On Nibletts Bluff prospect in Calcasieu Parish, A. G. Oliphant (Bay Oil Corporation) has made location for Calcasieu National Bank 1. The test is 289 feet west and 330 feet north of the SEc SW 23-10s-12w. The wildcat is southwest of Plummer and McDanials' 1, 7378-foot dry hole that failed to show anything of commercial value. This prospect was discovered by geophysics and surface indications, also on the strength of showings of oil in shallow test drilled in the area.

Humble Oil & Refining Company Kratzer 5, Roanoke field, Jefferson Davis Parish, showed indications of becoming a producer during the past week. It will extend the field northwest approximately 750 feet. The well was drilled to 8694 feet in oil sand with the top of the producing sand found at 8687 feet. Seven-inch casing was set at 8688 feet.

The discovery well for the new Lake Mengouloi salt dome, St. Martin Parish, was abandoned during the past week at 7548 feet. The well drilled into salt at 7540 feet and continued in the formation until it reached the abandoned depth. This wildcat had sand that showed oil at 6908 to 6917 feet and from 7281 to 7289 feet with water sands at 7289 feet. No doubt The Texas Company's Lake Mengouloi 1 will lead to further exploratory work around the flanks of the new salt dome. The test is located 5180 feet east and 350 feet north of the southwest corner of Section 10-9s-9e, St. Martin Parish.

Harrison & Abercrombie's Schwing 4, approximately 4000 feet northwest of production in the New Iberia field, Iberia Parish, has been completed as a dry hole at 6816 feet, plugged back depth.

The well recently was drilled to 6784 feet in shale topped at 6660 feet. Seven-inch casing was set at 6771 after drilling sand and shale showing oil from 6754 to 6780 feet. The well was swabbed and showed 20.3 gravity oil, but washing for two hours did not cause a flow. The tubing was pulled and the hole carried deeper. A sand cored from 6796 to 6803 feet showed oil, and at 7150 feet it went into heaving shale and then into salt at 7194 feet. At 7355 feet in salt the operators plugged back to test sands at 6796 to 6803 feet. Trouble was encountered with the hole at 6590 feet. After overcoming the trouble the hole was carried down to the abandoned depth. Harrison & Abercrombie's Schwing 4 is 200 feet west and 100 feet north of Humble Oil & Refining Company's Schwing 2 and 2600 feet south and 2901 feet east of the northwest corner of Section 56-12s-7e.

The Texas Company was running seven-inch casing on Rigolette 2, Bayou St. Denis (Lafitte) field, Jefferson Parish, to complete the third test for the field and also extend it approximately 1000 feet southwest. The Texas Company's Rigolette 2 drilled to 9603 feet in oil sand found at 9576 feet. An electrical logging device was run and casing will be set at 9578 feet. This test is located 933 feet west of Rigolette 1 and 933 feet south of Bayou St. Denis 2, being 467 feet south and 1194 feet west of the northeast corner of Section 30-19s-24e.

The operators have one other well drilling in the field. It is L. L. E. Lafitte 3, which is 1000 feet east and north of the discovery well. At the end of the week the test was down to 5870 feet in shale in a side-tracked hole. The hole had been carried to 7220 feet where the drill pipe was stuck. It was plugged back and side-tracked at 3271 feet.

The second producer for the Garden Island Bay field, Plaquemines Parish, The Texas Company's Garden Island Bay 17, showed 10 thribbles of oil on an 11-minute drill stem test made from 4895 to 4905 feet through ¼-inch choke on top and a ⅜-inch choke on bottom. The well showed a 35-pound pressure and 10 thribbles of oil and six thribbles of mud cut with oil. Seven-inch casing was set and a production test will be made the coming week.

The well was originally drilled to 5527 feet in salt, with the top of the salt at 5516 feet. An electrical logging device was run to 5522 feet. The hole was plugged back to 4968 feet and casing perforated from 4886 to 4903 feet and the drill stem test was made.

The Garden Island Bay field was discovered September 11, 1935, when The Texas Company's Garden Island Bay 16 came in for 525 barrels of 37.2 corrected gravity oil in the Miocene formation from sands 4913 to 4927 feet. The field is located on the Mississippi delta and is the most southeastern field in the Gulf Coast.

SOUTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CAILLOU ISLAND—		
Texas Co., Caillou Island 30	1112	3938
DARROW—		
Humble, Gumble 5	*	6901
JENNINGS—		
Port City Oil Co., Syndicate 6 (wo)	*	2240
NEW IBERIA—		
Harrison & Abercrombie, Schwing 4	*	7355
SULPHUR—		
Union Sulphur Co., Fee 781 (wo)	1206	3694
Fee 807 (wo)	144	3120
PORT BARRE—		
Pan American Production Co., Cormeir 1	*	4925
WHITE CASTLE—		
Shell, Watkins 30	450	4265
ST. MARTIN PARISH—		
The Texas Co., State Lake Mengouloi 1, sec 10-9s-9e	*	7548

*Failures; †Junked; ‖Million cu. ft. gas.

OUTLINE PROGRAM
Southwest A.P.I. district will meet at Shreveport

Shreveport.—The spring meeting of the American Petroleum Institute's Southwestern District has been scheduled to be held April 9 and 10 in the Washington-Youree Hotel at Shreveport. The meeting is to be held under the auspices of the Institute's Division of Production.

John S. Ivy of United Gas Company, will discuss the new Rodessa oil field at the morning session April 9. In the afternoon the characteristics of producing sands, mechanical analysis of pumping installations, and oil recovery from combination sulfur- and oil-producing salt domes will be considered.

At the April 10 morning session the discussion will concern the progress of geological investigation in Louisiana, and recent developments and results in drilling heaving shale. The afternoon session will be given over to consideration of Diesel drilling rigs, and the mechanical analysis of rotary drilling rigs.

LOUISIANA PERMITS

Shreveport, La.—Twelve drilling permits were authorized last week by the minerals division, Louisiana Conservation Commission of which five were for North Louisiana, including four in Caddo Parish, all in Rodessa, and one in LaSalle Parish. The seven in South Louisiana were divided among the following parishes: Acadia, three; Calcasieu, one; Iberia, two; and Jefferson Davis, one.

Watch Edge Tests

EXTENSION EAST AND WEST SEEN POSSIBLE

NORTH LOUISIANA WEEKLY STAFF REPORT

Shreveport.—Center of interest in the Rodessa field last week was Lion Oil Refining Company's John M. Wynn 1, NE SW 9-23n-15w, 1½ miles northeast of Bartex Pipe Line Company's B. H. Norton 1, Section 18-23n-15w, completed recently to extend production 1½ miles east.

Lion Oil Refining Company's test logged base of the last stringer of anhydrite at 5818 feet; elevation is 341 feet. It logged top of the Hill sand, first of the three gas producing horizons at Rodessa, at 5862 feet. Later it was drilling lime and shale at 5960 feet, probably in the Gloyd horizon.

If this test makes a producer it probably will be in the Dees sand, the lowest of the three gas producing zones in Rodessa, as it is checking too low to make a well in the Young sand. Two wells down the slope from the top of the Rodessa high have yielded oil in commercial quantities in the Dees.

Another interesting outside test at Rodessa last week was American Liberty Oil Company's J. B. Rodgers 1, C. M. Robinson Survey, Cass County, Texas, 2½ miles west of production. This test after showing salt water at 6030-35 feet in what was identified as the Dees sand, was deepend to 7000 feet and failing to pick up any production, is now plugging back to re-test the Dees at 6050-70 feet. If this fails to produce, it is planned to test the Hill sand logged from 5800 to 5920 feet.

Rodessa added five producers last week. The new wells completed last week are: Pelican Oil and Gasoline Company's Sexton 8, Section 14-23n-16w, flowing 33 barrels of oil per hour through quarter-inch choke at 6014 feet; Haynes Production Company's Pitts A-2, Section 14-23n-16w, completed at 6045 feet, flowing 83 barrels of oil per hour through half-inch choke; Haynes Production Company's Lawton 7, Section 14-23n-16w, completed flowing 200 barrels per hour through 1½-inch tubing choke at 6006 feet, casing pressure being 700 pounds and tubing pressure being 180 pounds; United Gas Public Service Company's Spearman 1, Section 15-23n-16w, flowing 28 barrels per hour through half-inch choke at 5995 feet; and United's Rodessa 5, Section 22-23n-16w, one of the best wells in the field, completed flowing 108 barrels per hour through half-inch choke at 5985 feet.

Three outside locations were included among eight announced in the field last week, these two being Delta Jones

NORTH LOUISIANA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (Pine Island)—		
Falcon Oil Co., Inc., Glassell et al 1, 26-20n-15w	†	2332
CALDWELL PARISH—		
G. W. Zeigen et al, La. Cent. Lbr. Co. 2, 19-14n-3e	*	1675
SABINE PARISH (Zwolle)—		
Alexander & Caves, Fogman 1, 18-7n-11w	*	2655
UNION PARISH (Monroe)—		
Farrell & Co., State of La. 8, 20-20n-4e	¶3	2136

*Failures; †Junked; ¶Million cu. ft. gas.

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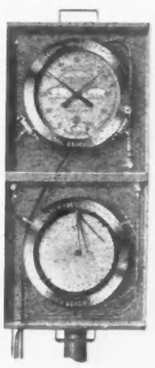

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Drilling Company's Madie Sharpe 1, SW SE 4-23n-16w, and Bartex Pipe Line Company's Adams 1, NW NW 17-23n-15w. The former company is also planning a deep test in Miller County, Arkansas, between Doddridge and Red River, having assembled a block of 3000 acres in township 18 south, range 27 west. As a result of the Bartex well's completion and the possibility that the Lion's John M. Wynn 1 may be a prodcer, interest has been increased in southeast Miller County in the Kelly Lake area, township 20 south, range 27 west, where East Texas Refining Company and Shell Petroleum Corporation are leading in a leasing campaign. The third outside location was United Production Company's J. I. Jones 1, Ben Murray Survey, Cass County, Texas.

With the Young sand too far down the dip to the northwest to be above the salt water level at Rodessa, operators are now hoping that the Gloyd sand in that part of the field may produce. This hope is based on the fact that United Gas Public Service Company's Mitchell 1, Section 20-23n-16w, a northwest edge well completed recently, in the Young horizon, had a good oil saturation in the Gloyd at 5889-97 feet while Vaughn Production Company's Comegys 1, SE SE 10-23n-16w, failed to get production in that horizon.

Sligo Gas Well

Producers Oil & Gas Company (W. E. Hall and associates) last week made production test of Pettit 1, NE SW 17-17n-11w, Bossier Parish, a half-mile southeast of the 4200-foot Glen Rose wet gas producing horizon at Sligo and the test was estimated at 70 million cubic feet of saturated gas daily. Total depth is 5199 feet and seven-inch casing was cemented at 5147 feet. The total depth hitherto has been given as 5260 feet. Elevation is 198 feet. Fourteen feet of Coquina lime similar to that producing at Rodessa was encountered.

Since the gas was saturated and is coming from approximately 1000 feet deeper than the former gas production at Sligo considerable leasing with the hope that around the flanks of Sligo will be another Rodessa has been done.

Producers Oil and Gas Company since the Pettit 1 was tested, have leased 1100 acres of the Skannal Estate centering in Section 21-17-12 and will spud a 5500-foot test by February 15.

Location for a 6000-foot test on the northeast flank of the Monroe Uplift was made last week by Henry E. Rondeau and associates of Shreveport in Clark 1, SE Section 10-20n-7e, Morehouse Parish. Their block comprises 8000 acres. Contract has been given to George L. Pace, Shreveport drilling contractor. It is expected to spud by February 15. The contract calls for much coring, testing and running of electrical testing devices.

Rodessa Drilling Report

Wells actively drilling last week at Rodessa follow: American Liberty Oil Co.'s J. B. Rodgers 1, C. M. Robinson Survey (Cass County, Texas) pb to test Dees sand 6050-70 ft old td 7000 ft.

Ark. La. Gas Co.'s Rodessa O&L Co. 7, 23-23n-16w, cemtd 7-in csg td 6004 ft. Rodessa O&L Co. 8, 23-23n-16w, dr 2410 ft. Rodessa O&L Co. 9, 23-23n-16w, 10-in csg 2081 ft.

Bartex Pipe Line Co.'s Sarah Bruner 1, 13-23n-16w, elev 244 ft top red beds 3350 ft dr 4955 ft lime & sand. Robinson 1, 17-23n-16w, elev 248 ft dr 2135 ft hd lime; Robinson 2, dr 3130 ft shale.

Danciger O&R Co.'s Willis 1, 23-23n-16w, fsg 5620 ft.

Haynes Prod. Co.'s Caldwell 3, 12-23n-16w, dr 5867 ft lime & shale; Lawton 8, 14-23n-16w, dr 3026 ft shale; Pitts B-1, 14-23n-16w, cemtd 9⅝ in csg 2072 ft td 2124 ft. Tyson 1, dr 3835 ft lime & shale; Tyson 2, setting 12½ in csg 275 ft. Zylks 1, 9-23n-16w, dr 5420 ft lime & shale.

Lion O&R Co.'s Wynn 1, ne sw 9-23n-15w, elev 341 ft top first anhydrite 5212 ft top massive anhydrite 5477 ft base stringer anhydrite 5818 ft top Hill sand 5862 ft dr 5960 ft.

R. W. Norton's Mary Rives 1 (Cass County, Texas), dr 5703 ft. Atkins 1, spd. Spearman 1, dr 3921 ft. Tyson 3, spd dr 1600 ft.

Pelican Oil & Gasoline Co.'s Sexton 9, 14-23n-16w, top first anhydrite 5030 ft dr 5105 ft hd shale; Sexton 10, 14-23n-16w, fsg 5524 ft. Sexton 11, 14-23n-16w, dr 4239 ft shale strks lime; Sexton 12, 14-23n-16w, dr 5445 ft anhydrite; Sexton 13, 14-23n-16w, dr below 10¾ in csg at 2011 ft.

Marr et al's Hunter 2, 13-23n-16w, dr 4975 ft. Hunter 4, dr 1915 ft.

United Gas Pub. Serv. Co.'s Ardis 3, 14-23n-16w, dr 5115 ft. Ardis 4, 14-23n-16w, dr 4606 ft. Bremer 5, 22-23n-16w, fsg 2020 ft. Harris 1, 15-23n-16w, dr 3387 ft. Miller 2, 14-23n-16w, dr 2200 ft. Rodessa O&L Co. 7, spd wocs 310 ft. Rodessa 8, wocs 3187 ft. Rodessa 9, dr 2315 ft. Rodessa O&L Co. 10, dr 4340 ft. W. B. Spearman 2, nw nw 22-23n-16w, dr 5500 ft. N. S. Spearman Unit 1, 18-23n-15w, dr 2200 ft. Tyson A-1, 14-23n-16w, arr dr plug td 6020 ft. Tyson 2, 14-23n-16w, carr dr plug td 6025 ft. Tyson 3, 13-23n-16w, dr 5671 ft. Tyson 4, 13-23n-16w, wocs td 6025 ft. Tyson 5, 13-23n-16w, dr 3520 ft. Tyson 7, 13-23n-16w, spd wocs surf csg.

Shreveport. — Amerada Petroleum Corporation last week completed its second well in the new Bunkie field, Rapides Parish, central Louisiana. The new well is Weil 2, Section 53-1s-2e, completed at 5715 feet flowing 10 barrels per hour through 14/64-inch choke with tubing pressure of 1550 pounds and casing pressure of 1800 pounds. The well was also completed making 1,350,000 cubic feet of gas. It is 990 feet east of the discovery well of the field, Weil 1 in the same section. The latter well is still about five barrels per hour. Amerada has made location for Weil 3, located 2500 feet west of the Weil 1.

WILDCATS INCREASE

North Louisiana expects additional deep drilling

Shreveport. — Wildcat activity in northwestern Louisiana is expected to show a large increase with the opening of spring. At present a large amount of leasing and geophysical work is being done and a number of tests are being started.

Last week, Lent, Bocher and Sears started moving in rig for a 4000-foot wildcat test in Union Parish near Farmerville, where they have a block of 8000 acres. The test is Frost Lumber Company 1, NEc 27-21n-1e. George L. Pace of Shreveport has the drilling contract.

In Jackson Parish in the North Louisiana Basin, Arkansas-Louisiana Gas Company (Cities Service) paid Byron H. Schaff $5 per acre for approximately 1000 acres centering in Sections 26 and 27-17n-3w, southeast of its Lincoln Parish oolitic lime gas well in Section 10-17n-4w. In this same parish Texas-Seaboard Oil Company recently completed a 7300 acre block centering in Section 21-15n-3w. This company is running a profile west from Jonesboro, parish seat of Jackson Parish, west via the village of Danville to the hamlet of Lucky in Bienville Parish.

In Bienville Parish, Lide and Greer have sold Standard Oil Company of Louisiana 320 acres in their block centering around Section 12-16n-5w, where a test is being drilled, for $50 per acre and Ohio Oil Company has bought 600 acres in the block for $25 per acre.

Gulf Refining Company has taken 2200 acres in Red River Parish northeast of the old Cricton field, centering in Section 13-13n-9w, for a consideration of one dollar per acre.

W. W. Blocker is taking leases in

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township 15 north, range 1 west and township 14 north, range 2 west in Jackson Parish, and in the same parish R. G. Lawton is leasing in township 15 north, range 1 west.

Arkansas-Louisiana Gas Company is checking its block near Ruston in Lincoln Parish with seismograph and will make location before April 1 probably in Section 33-19n-2w.

In Claiborne Parish, J. D. Houseman of Shreveport has blocked approximately 3500 acres in township 22 north, ranges 5 and 6 west for a proposed 5000 foot test, and more will be added to the block.

Geophysical work is being done by several companies in Cass and Marion Counties in East Texas just across the line from the Rodessa oil field in Caddo Parish, Louisiana.

In Marion County, Sinclair-Prairie has a seismograph crew running a profile along the highway between Jefferson and Lodi. United Gas Public Service Company has a seismograph crew working in the L. P. Cadenhead and surrounding headright surveys. In Cass County, southwest of Atlanta, a seismograph crew is working in the Nick Edgar and surrounding headrights for De Golyer and Karcher.

AWAITS COMPLETION

First Graben production in Arkansas expected

Texarkana, Ark.—King Oil Corporation, drilling in SWc NW 19-16-25, has completed an electrical core test showing a saturated sand at 3800 feet on the G. W. Crank 1, and is curing titles preparatory to bringing in what is considered will be the first pay in the Graben fault. South of King's Crank 1, Erwin-Wadley lease group have blocked 4000 acres of the Dorsey Land and Lumber Company on which they will make a test as soon as they have completed a deep test on the Bodcaw Lumber Company south of Stamps. This will be the third effort of these interests to pick up the pay on the Graben which they are confident is the key fault to large oil bodies in the lower Glenrose Commanchean Cretaceous of the Trinity, corresponding to the oolitic lime strike of the Rodessa field.

ARKANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
COLUMBIA COUNTY—		
Magale & Elam, Levi Garrett 1, 13-17-20	*	4004
GRANT COUNTY—		
Wallace & Neill, J. M. Harrison 1, 25-6s-15w	*	2034
UNION COUNTY (Rainbow City)—		
W. M. Smith, Finley 1, 12-17-14	*	3360
MILLER COUNTY (Garland City)—		
M. H. S. Oil Co., H. Beck 1, 34 15-26	95	2928
UNION COUNTY—		
I. J. Allen, Union Sawmill Co. 1, 8-17-12	*	3295

*Failures; †Junked; ¶Million cu. ft. gas.

Leasing Is Active

ARKANSAS FEELING RODESSA INFLUENCE

WEEKLY STAFF REPORT

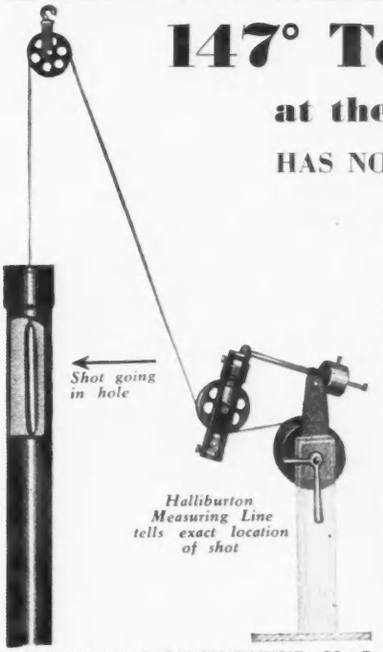
Texarkana.—Scouts for Humble Oil & Refining Company, Shell Petroleum Corporation, Gulf Production Company, The Texas Company and Phillips Petroleum Company are becoming much in evidence in Miller County, Arkansas, and in east Cass and Bowie counties in Texas, in what is believed to be preliminary work to deep well drilling activities on holdings these companies have already.

With some 8,000 acres in an abstracted lease block in Townships 16-28 and 17-28, Miller County, Arkansas, Odell Henson Oil Corporation has made location in the NWc 3-17-28 on Montana Realty Company lands. Materials are being assembled and roads constructed preparatory to putting down the first of a series of three wells. Geological and geophysical analysis of the company's holdings, which cover the Day's Creek basin, are said to present possibilities in both the Woodbine and deep Trinity formations.

Renewed interest in the Ida-Kiblah sector of southeast Miller County, along the Louisiana-Arkansas line, is being focused on the Kelley Lake basin in township 20-27. A steady acquisition of holdings by East Texas Refining Company, Magnolia Petroleum Company, The Texas Company and more recently by Shell Petroleum Company is stimulating independent operators. The result of Bartex Pipe Line Company's Rodessa outpost producer, and the foreshadowed bringing in of Lion Oil & Refining Company's wells in Louisiana across the Arkansas line, have brought geologists and geophysical exploration interests closer together to analysis formations and the possibilities of Rodessa extending north and east of Ida to the Red River.

Confirmation of a rumored deep test in Township 18-27, south Miller County, between Doddridge and the Red River, comes in the announcement by Jones and Flake interests of Rodessa that they have completed a 3000-acre block embracing the Bush lands and that practically all preliminaries have been completed for the begining of operations within 60 days. The area will be watched with special interest as being a projection of the potential area of the Rodessa Fault coming north from the Ida-Kiblah sector.

Haynes Production Company is to



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drill a test in the southeast quarter of 5-20-28, Miller County, a mile north of the company's abandoned Allen 1 test. During the drilling of the Allen test, which was bottomed at 6500 feet, a saturated Woodbine sand was reported at 3434 feet, but the well was carried ahead to the Trinity lime.

In Columbia County, Arkansas, Robert Holmes is assembling a block of acreage around Section 19-17-18, paying one dollar per acre, and planning a 4000-foot test, to be spudded by next April 1. The leases were taken in the name of J. C. Buckbee, trustee.

Three miles south of Fordyce, in Calhoun County, Willis Raines is assembling a block in township 11 south, range 13 west for a 3500-foot test.

Considerable wildcat activity is reported in Union County. C. H. Murphy and associates taking leases in township 16, ranges 10, 11 and 12 paying $1 to $10 per acre. Joe B. Hurley is leasing in township 18, range 17. Mrs. Mamie McCurry and associates have taken 2000 acres in the old Lisbon shallow field, centering around Section 9-17-16 for a proposed 4000-foot test.

TEST DEEPENS

Florida well is to drill ahead; new test starts

Pensacola, Florida.—J. Ray Arnold and associates have resumed drilling on their South Lake 1 well, near Groveland, after testing for several weeks. The casing seat has been recemented at 2200 feet. After drilling plug the hole was bailed down in seven hours. Bailing was continued intermittently thereafter for 48 hours with the well making eight barrels of water per hour. Some evidence of gas was noticed throughout the period of bailing. The test is now coring at 2350 feet.

Mrs. Mamie Hammonds of Oklahoma and associates have made location and are moving in rig for Grandberry 1, SW NE 15-15n-9w, Jackson County, near Marianna. Contract has been let to Joe Modisett of El Dorado, Arkansas.

MISSISSIPPI WORK

Amory, Mississippi.—P. J. McAlpine is planning to shoot his Charles Rye 1, SE SW 22-15s-17w, Monroe County, Mississippi, which has been temporarily abandoned at 2917 feet for several months. He will shoot formation at 2883 feet in a sand that showed oil while being drilled. A former shot was discharged 30 feet above this level, it is said.

Preparatory to a possible building up of a reserve of acreage with potential gas production as a basis for a WPA project, the City of Vicksburg has leased 118 acres in the south half of Section 30-6n-2e, in the Jackson gas field. It is believed that funds will be sought for a WPA project to build a gas line from Jackson to Vicksburg to supply that municipality with gas from a municipally owned natural gas distribution system.

Continue Push

LEA COUNTY OPERATORS EXTENDING DRILLING

WEEKLY STAFF REPORT

Hobbs.—Appearance of bottom hole water in two tests drilling near the north and east flanks of production in the Eunice field failed to disturb operators in making locations on more remotely situated leases. This area added six new locations, while the Monument field's list of active tests was bolstered by three new projects making a total of nine for Lea County the past as compared to 11 the previous week.

Humble Oil & Refining Company's A. J. Adkins 2, C SW SW 10-21s-36e, developed sulphur water despite its relatively high structural position. The hole was carried to 3910 feet, or 319 feet sub-sea, and could not lower the fluid level below 3000 feet when swabbed for eight hours through tubing. It was treated with 1000 gallons of acid, and responded with a 30-minute head, then ceased flowing. Swabbing test that followed showed 95 percent sulphur water. The hole has been plugged back to 3880 feet, or 289 feet sub-sea. The company has temporarily abandoned plans to drill Adkins 3, C NE SW 10-21s-36e, and has moved materials one location east to drill J. D. Knox 1, C NW SE 10-21s-36e. Gypsy Oil Company has made location about one mile southeast to drill C. H. Collins 1, C SE NW 14-21s-36e.

Gypsy Oil Company's State-Bell-Ramsey 7, C Lot 13, Section 4-21s-36e, virtually proved location near the north end of production, encountered sulphur water at 3935 feet and had proceeded to 4146 feet to proceed with a test of the entire section. First oil production was logged at 3780 feet, with the best oil saturation in lime at 3820-3895 feet. It will make a commercial producer when plugged back to the latter depth. Gypsy Oil Company has made location on the west side of the field to be identified as State-Eunice 1, C SW SE, Section 6-21s-36e. Amerada Petroleum Corporation's Houston 2, diagonal southeast offset was completed the past week flowing 252 barrels daily through 24/64-inch choke on tubing from lime at 3880 feet. Packer was installed on tubing at 3797 feet to curtail excessive gas-oil ratio.

Devonian Oil Company is venturing about a half-mile east of production in the north portion of the Eunice field in starting operations on State-Evans 1, C Lot 15, Section 3-21s-36e. Nearest production, held by Jim Murray and Sun Oil Company, developed sulphur water shortly after completion.

High initial yield was recorded by Shell Petroleum Corporation and Devonian Oil Company's State 4, C SE NE 20-21s-36e, having gauged 41 barrels of oil during first hour and increased progressively to 142 barrels hourly on the sixth-hour from lime at 3918 feet, or 301 feet sub-sea. Gypsy Oil Company made location for State-Arnott-Ramsey 4-C, C SW NW 21-21s-36e, an east offset to the above producer. Tide Water Oil Company's State 2-D, C SW SE 16-21s-36e, is also a new location for the east side of the structure. Empire Gas & Fuel Company's S. F. Felton 1, C NE NW 28-21s-36e, declined to 12 barrels of oil per hour on swabbing test after using 3000 gallons of acid in lime at 3900 feet, or 296 feet sub-sea. The dolomite lime was shot with 300 quarts of nitro at 3750-3900 feet, and recorded a substantial gain in oil and gas yield, but no information was available as to the volume of production.

Two of the new locations assigned the Monument field were on the east side of the structure. Shell Petroleum Corporation's State 1-D, C NW SE 19-19s-37e, and Jeffers Oil Company and Anderson-Prichard Oil Corporation's H. M. Britt-Conoco 2, C NE NW 7-20s-37e, are east offsets to producers. Amerada Petroleum Corporation's State 1-M, C SE NW 2-20s-36e, is a new location for the west edge of the producing area. The latter concern's C. H. Weir 1, C SW SW 35-19s-36e, extended the producing limits of the field one location west by developing 1400 feet of oil in hole while drilling with cable tools at 3849 feet. Rotary rig was discarded after drilling to 3818 feet, with 7-inch pipe cemented at 3815 feet. Amerada Petroleum Corporation recently used standard tools in completing State 1-I, resulting in a 744-barrel natural producer. Repollo Oil Company is to use standard rig in completing J. H. Williams 1, NEc 33-19s-37e, located about three miles from nearest production. It was drilled to 3800 feet with rotary.

INTO NEW BUILDING

Move Laramie Bureau of Mines petroleum station

Casper.—The University of Wyoming has erected a building on its campus to provide quarters for the Petroleum Experiment Station of the United States Bureau of Mines, Department of the Interior. The new experiment station was established in July, 1935, and takes the place of the former petroleum field office of the bureau that was maintained at Laramie on the University campus from July, 1924, until lack of funds required it to be closed in August, 1933.

The building, a one-story brick structure, contains offices, laboratories, ga-

rage, and storerooms for chemicals, tools, mechanical equipment and office supplies. The building is exceptionally well lighted, and because of careful design, all available space is well utilized. The laboratories and their storerooms account for half of the 3600 square feet total floor space. The foundation and walls were made heavy enough to carry a second story when additional space becomes necessary in the future.

The new station has a larger personnel and is better equipped to serve the petroleum industry in the Rocky Mountain region than the former field office. Its location on the University campus offers many advantages, such as access to the extensive University library, use of the machine shop where experimental apparatus may be built, contact with the faculty for discussions of different technical subjects, and provision of adequate and comfortable working quarters.

MOUNTAIN STATES

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
NEW MEXICO		
LEA COUNTY (Eunice Field)—		
Amerada, H. L. Houston 2, c ne ne 7-21s-36e	1000	3880
Atlantic O.P. Co., State 3-H, C Lot 10, 5-21s-36e,	288	3894
Gypsy Oil Co., Arnott-Ramsey-State 3-C, c nw sw 21-21s-36e	968	3898
Orcutt 2, C Lot 13, 5-21s-36e	616	3895
Repollo Oil Co., et al, State 3, nec nw se 19-21s-36e	1000	3950
LEA COUNTY (Hobbs Field)—		
Tide Water, State 1, sec se ne 14-18s-37e	10	4368
LEA COUNTY (Monument Field)—		
Amerada, State 1-J, c sw se 2-20s-36e	2000	3921

*Failures; †Junked; ¶Million cu. ft. gas.

1935 STOCKS UP

Los Angeles.—California stocks of crude oil and other petroleum products increased 4,378,583 barrels during December according to official figures compiled by the Los Angeles office of the American Petroleum Institute, bringing total storage of all products to 130,628,646 barrels. This compares to 126,218,317 barrels as of December 31, 1934.

Total of 1,307,463 barrels of heavy crude including fuel oil were added to stocks in December while light crude oil storage was increased 1,299,903 barrels. Gasoline stocks were up 1,171,606 barrels to total of 10,760,001 barrels. Natural gasoline stocks were up 63,292 barrels to 1,568,182 barrels.

61 PLANTS BUSY

Los Angeles.—During December, 61 refineries with a total daily charging capacity of 873,760 barrels were in operation in California, while 88 natural gasoline plants were busy, having a total daily capacity of 2,083,500,000 cubic feet of gas throughput. These figures were compiled by the California office of the Bureau of Mines.

Drilling Deep

CALIFORNIA OPERATORS MORE ACTIVE THIS YEAR

WEEKLY STAFF REPORT

Los Angeles.—Deep holes are the order of the day in several California fields, in the Ventura Avenue field and in the San Joaquin Valley.

The leader for depth is Union Oil Company's Lillis-Welch 1, Section 24-21-16, Kettleman Hills, outskirt test, which was drilling in very hard sand at 11,053 feet at last report. This hole has 10,813 feet of 6⅝-inch casing cemented. The formation is thought to be too tight to contain oil.

Standard Oil Company is coring hard sand and sandy shale in No. 54-1U, Section 1-23-18, Kettleman North Dome. The same company's No. 82-7Q, Section 7-22-18, is bottomed at 8466 feet in gray sand and is reaming.

Kettleman North Dome Association's No. 36-36Q, Section 36-22-18, is bottomed at 9733 feet and is cleaning out at 9078 feet. This hole has 6⅝-inch casing cemented at 9017 feet. The same association's No. 54-24H, Section 24-21-16, is coring gray sand at 8688 feet, with 9⅝-inch landed at 8263 feet.

At North Belridge in Kern County, Union Oil Company's Gibson 7, Section 36-27-20, is coring shale and sand at 9287 feet, showing oil. Top of the oil sand was picked up at 9224 feet, and the black shale was topped at 9158 feet. This hole has seven-inch cemented at 8565 feet. Only two other wells are actively drilling in the field, but rigs are up for two more to start at once. One other location has a rig standing.

In the Ventura Avenue field, 12 strings of tools are active and three holes deeper than 9000 feet are busy. Associated Oil Company's Lloyd 133 with old bottom at 9218 feet was redrilled to 6650 feet where 570 feet of 6⅝-inch perforated has been landed for a test.

General Petroleum Corporation's Notten 13 is bottomed at 9510 feet and is fishing for drill pipe at 8128 feet. This hole has 8455 feet of 5⅝-inch casing cemented.

Shell Oil Company's Dabney-Lloyd 3, with bottom at 9583 feet, is swabbing 240 barrels of water and a little oil. The well flows at times by heads. Seven-inch casing is cemented at 8782 feet.

The deep Eocene test being drilled by the Barnsdall-Rio Grande combination at Elwood stopped the drill at 7157 feet and tubing is being run for a production test. Six thousand, twenty-five feet of 5¾-inch pipe has been cemented. Operations were slowed down due to a fishing job, but the fish was recovered without any serious trouble. If this well proves productive, other deep tests are to be drilled.

In Los Angeles Basin, one deep test at Santa Fe Springs was drilled to 9200 feet and has been plugged to 4600 feet for a test of the zone between 4420 and 4595 feet. This hole was drilled by Wilshire Oil Company and rumors are that it may yet be drilled deeper. String of 6⅝-inch pipe had been cemented at 8275 feet.

Geo. L. Clayton is drilling a deep wildcat in North Long Beach which is bottomed at 6745 feet. String of 4½-inch casing was cemented at 4700 feet.

Shell Oil Company is drilling a deep test west of Long Beach, at 5132 feet in gray sand with streaks of shale. Last casing was 18⅝-inch landed at 1021 feet.

CALIFORNIA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
NO. BELRIDGE—		
Standard, McPhail 3	210	8378
COFFEE CANYON—		
California Western No. 7-12	350	1538
EDISON—		
A. T. Jergins Trust, McCowan 13-A-8	350	1502
R. & R. Dev. Co. R&R 1	*	1116
KERN FRONT—		
C. C. M. Oil Co., No. 54	125	2040
McDonald & Dearin, No. 1	150	2129
MOUNTAIN VIEW—		
Ohio, Derby 3	40	5808
Standard, Wible 8	140	5545
ELWOOD—		
Signal O&G Co., No. 6	2570	3755
DOMINGUEZ—		
Union, Hellman 30	45	7893
HUNTINGTON BEACH—		
V. R. G. Wilbur, Twining 2	120	3570
LONG BEACH—		
Continental Properties, Bixby 1	20	4950
20th Century Oil Co., No. 3	250	4140
LOS ANGELES COUNTY—		
No. American Consolidated, Smith 3-1	*	5952
FRESNO COUNTY—		
Seaboard Oil Corp., Boston Land Co. 1	*	3500

*Failures; †Junked; ¶Million cu. ft. gas.

Wildcats Active

At the close of 1935, only 214 wells were drilling in California compared to 205 at the close of the first month that year, but the number of active drilling wildcats had increased from 33 to 36, and number of active drillers at Long Beach had decreased from 27 to 23.

It is indicated that drilling in California is more widespread at the start of 1936 than at the beginning of 1935. Drilling activity of the state reached a peak in July for 1935, when 272 strings of tools were busy but this total

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included 65 at Long Beach, 42 more than were drilling at the close of December. In July, 41 wildcats were drilling, but this number dropped to 35 the following month.

There will be considerable new drilling in California in 1936. The increase in activity will be widely scattered. There will be some gain in wildcat drilling, but the center of interest will be in seeking deeper sands in proven areas.

It is possible that wells to test zones from 10,000 to 12,000 feet will be started at Long Beach, Elwood and Santa Fe Springs.

26 DRILLING TESTS

Mountain View is active and expects completions

Los Angeles.—Twenty-six wells are drilling at Mountain View in Kern County, and several wells are nearing the completion stage. The previous week two wells were completed with rather small initials. Shell Oil Company is drilling three holes and has rig up for the fourth. Standard Oil Company is drilling four holes, with one almost ready for the production test. Hogan Petroleum Company is drilling three, with one ready for completion.

Wood-Callahan Oil Company's Wells 2 is setting a fast pace for the Mountain View, having drilled to slightly more than 5000 feet in 23 days. This hole was spudded January 2 and 13⅜-inch surface casing was landed and cemented at 999 feet during that period. It is customary to land either 6⅝-inch or 8⅝-inch pipe in this field at depths ranging from 5000 to 5400 feet.

Wood-Callahan has acquired a 65-acre lease in the Duff area four miles east of Mountain View and drilling operations will start within 90 days. The first well will offset the Gilco Oil Company producer. This company also plans to go back into Cowan 1 at Mountain View to deepen from present bottom of 5695 feet into the Santa Margarita zone.

1935 PRODUCTION

Los Angeles.—California produced total of 207,832,131 barrels of crude oil in 1935, a daily average of 569,403 barrels, according to figures compiled by the Los Angeles office of the American Petroleum Institute. Kettleman Hills led with an annual total production of 27,606,817 barrels, with Long Beach a close second with 26,562,848 barrels. Midway Sunset was third with 20,239,798 barrels and Santa Fe Springs produced total of 16,158,795 barrels. Huntington Beach was credited with 15,133,293 barrels and Ventura Avenue produced 10,979,450 barrels. The 763 oil wells completed during 1935 were credited with 660,980 barrels of initial production. Thirty-four gassers were completed during the year. The completion of 347 dry holes gives the state a grand total of 1110 completions during 1935, compared to 699 in 1934 and 411 in 1933. The low was 375 completions in 1932. The year 1929 reported 1224 completions for the state.

EASTERN FIELDS

WEEKLY STAFF REPORT

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
OHIO		
ATHENS COUNTY—		
Carpenter & Glazier, Smith 8	4	326
Ellicott Oil Corp., Pickett 2.....	1	1013
C. W. Nuzum, Halbert 3.....	¶	1541
Ellicott Oil Co., Pickett 3.....	3	1019
MUSKINGUM COUNTY—		
Mid-East Gas Co., Bowman 1.....	10	4480
PERRY COUNTY—		
Thistle Oil Co., Stotler 11	6	1145
Ohio Fuel Gas Co., Smith 1.....	*	2850
Godfrey L. Cabot, Inc., Putney 1..	¶	4900
COSHOCTON COUNTY—		
The Pure Oil Co., Clark 1.....	40	3236
HOLMES COUNTY—		
David Shafer, Jarvis 3	35	....
KNOX COUNTY—		
G. S. Lacknett, Riggs 2.....	3	....
Davis, Stout & Co., McCullick 1....	*	....
MEDINA COUNTY—		
O. K. Oil & Gas Co., Essig 69....	*	402
Union Oil & Gas Co., Stobbs 1....	1	1893
MONROE COUNTY—		
N. T. Stoudt, Jackson 1.....	10	1530
Ohio Fuel Gas Co., Crocker 1....	*	....
E. R. Edson & Son, Franks 46....	*	545
J. C. Corner & Co., Platt 4.....	5	1579
J. F. Graham & Co., Adams 1.....		2005
J. F. Graham, Schnubager 1	¶	1502
MORGAN COUNTY—		
Kepple & Co., Forson 13.....	¶	1588
WASHINGTON COUNTY—		
Forest Ridgeway, Ridgeway 1....	*	1940
Hupp & Yovian, Washington Infirmary 6	2	518
Ohio Fuel Gas Co., McArthur Brick Co. 1	¶	2925
Mosier & Co., Hoon 52	5	454
Williams Brothers, Carrothers 5	¶	1181
D. T. Orndorf, Stull 4	7	793
MEIGS COUNTY—		
Hall & Co., Circle 1.....	¶	1957
Meigs Developing Co., Ours 2....	¶	2025
A. N. Bengel, Williamson 1	¶	2119
Meigs Dev. Corp., Hoback 1.....	*	1921
ASHLAND COUNTY—		
Ohio Fuel Gas Co., Segrist 2.....	¶	2851
WAYNE COUNTY—		
Ohio Fuel Gas Co., Williams 1.....	¶	3400
STARK COUNTY—		
East Ohio Gas Co., Smith 1	*	4215
SENECA COUNTY—		
Harpester & Co., Weber 3.....	¶	495
Wm. McPharon & Co., Fox 5.....	1	1496
HARDIN COUNTY—		
Kenova Oil & Gas Co., Beek 1....	*	1392
TUSCARAWAS COUNTY—		
Columbia Carbon Co., Schaar 1 ..	¶	5063
WEST VIRGINIA		
BOONE COUNTY—		
Owens Illinois Gas Co., Estep 1...	¶	1751
Pryor 19	¶	1863
Ballard 3	¶	1997
Peytonia 24	¶	....
CABELL COUNTY—		
Salt Rock Gas Co., Rowsey 1.....	¶	1315
CALHOUN COUNTY—		
Harley Jarvis & Co., McClain 1....	*	1565
H. S. Adams & Co., Gainer 2	¶	2177
MARION COUNTY—		
Carnegie Natural Gas Co., Morgan 1	¶	2948
RITCHIE COUNTY—		
E. S. Gilmore, Carpenter 1	*	1935
Dexter Gribble, Leonard 2	2	1893
C. M. Athey & Co., Ball 3.....	30	1930
ROANE COUNTY—		
George Smith & Co., McKown 1 ..	2	2100
Reedy Oil Co., Paugh 2	1	1780
DODDRIDGE COUNTY—		
Reno Oil Co., Dotson 2	*	2100
LINCOLN COUNTY—		
Kanawha Utilities Gas Co., Black 3	¶	2397
WOOD COUNTY—		
C. & L. Smith, McAtee 10	*	....
INDIANA		
DAVISS COUNTY—		
Wallace Oil Co., Ragsdale 1	*	750
Managers Discount Corp., Frye 1 ..	*	705

*Failures; †Junked; ¶Million cu. ft. gas.

Push Saginaw Work

SIX IMMEDIATE TESTS DESPITE WINTER SPELL

WEEKLY STAFF REPORT

Mt. Pleasant.—Severe winter weather and snow choked roads will not stop an immediate play in the Saginaw County area it appeared this week with six or more tests definitely scheduled to be on location before February 10. Four rigs are on location, three drilling, with two more being moved in, all scheduled for Dundee lime tests if commercial oil production is not found in the shallower Berea sand.

Leasing was stepped up the past week with a number of blocks being taken to assure a fair sized play and with a number of majors interested, commercial production in either the Berea, Traverse or Dundee would bring a brief campaign.

Exploration play at this time comes largely from the success of Smith Petroleum Company's Birch Run township block which is producing from the Berea sand at 1550 feet. Most wells have been small and ordinarily have been shot into production ranging from 10 to 50 barrels a day. One well averaged 160 barrels the first 24 hours. The present play will be in the Birch Run area, Richland township (where a commercial Traverse lime well at 2730 feet was drilled last fall), Taymouth and Jonesfield townships.

The Saginaw County play is characteristic to some measure of a number of drilling plays now started or likely to be made in Michigan this year where so far only comparatively small production is proven. Increased prices for oil and a strong market demand is believed to account for this particular phase of current Michigan exploration.

The Beaverton area in Gladwin County, opened more than a year ago, is coming in for a fair sized drilling play. Three factors accounted for the slow start in this district although the Whitehill-Kintner discovery well (17n-2w-11) in Dundee lime with an 80-barrel initial apparently opened a new structure. The Whitehill group controlled about 10,000 acres around the discovery, the Crystal field was opened shortly afterwards with open acreage and the first extension tests drilled in Gladwin failed to produce. Six commercial wells, ranging up to 20 barrels an hour initial, now have been completed and six tests are on location or drilling.

Success of Pure Oil Company's Steadman 1, 10n-5w-11, Montcalm County, initialing 30 barrels on hour in Dundee lime, appears to assure a drilling play in the southeast district of the Crystal pool and probably will lead to drilling up of the northeast tip of Duck Lake, between the well and the main part of the field. The Pure-Steadman offsets to the south the Fortney-Rockleman which initialed 800 barrels a day.

Mt. Pleasant, Mich.—Century Refining Company and Acme Refining Company, both of Alma, plan to merge and add to the present 3000-barrel Acme skimming plant a Dubbs cracking and reformation unit.

The $600,000 refinery deal is reported predicated on the closing of long term crude oil supply contracts with one or more large independent producing companies.

Acme Refining Company recently completed a 3000-barrel skimming plant at Alma.

F. K. Taylor, vice president in charge of industrial sales, Taylor Instrument Companies, is now on a several weeks visit to the Southwest and Pacific Coast offices. Taylor expects to be back in Rochester March 1.

MICHIGAN
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CLARE COUNTY—		
Sun Oil Co., Woodward 1, 19n-3w, sw se se-24	*	4380
GRATIOT COUNTY—		
Herbert Snell, Howe 1, 10n-2w, sw ne nw-19	*	3200
MIDLAND COUNTY—		
Pure Oil Co. Naramore 20, 13n-1w, nw nw sw-15	50	3409
Reed-Alspaugh 1, 13n-2w, c nw se-2	145	3435
Carning B 2, 13n-2w, ne nw 12	50	3410
MONTCALM COUNTY—		
Ref. Petroleum, Reynolds 1, 12n-7w, c ne ne-3	¶3.3	1290
Daily Crude Oil Co., Robins 8, 10n-5w, nw sw ne-3	600	3190
Gordon Oil Co., Strait 6, 10n-5w, nw se nw-3	1600	3198
Pure Oil Co., Steadman 1, 10n-5w, sw nw se-11	600	3189
OGEMAW COUNTY—		
C. G. Marsh, State 1, 21n-3e, nw ne sw-6	20	2615
TUSCOLA COUNTY—		
Smith Pet. Co., Boyce 1, 14n-7e, sec 24	20	2832

*Failures; †Junked; ¶Million cu. ft. gas.

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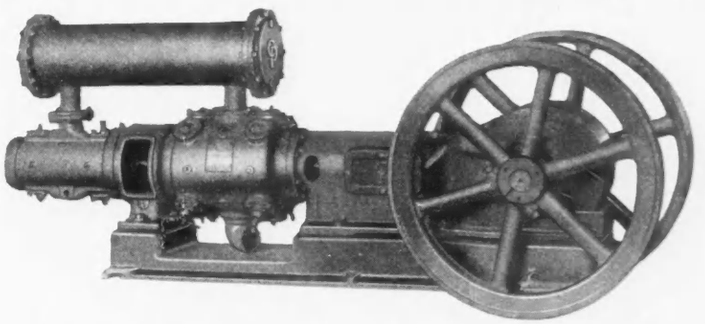

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THE OIL WEEKLY REPORT ON IMPORTANT

Wildcat Tests

ALABAMA

FRANKLIN COUNTY—McAlpine et al's Hobson et al 1, 26-8s-14w, elev 559 ft, co to 2589 ft, showing est 50,000 cu ft gas, may use acid again, td 2600 ft.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 1, nw sw 9-3n-29e, arr set 6-in csg after reported so & sg at 3438 (Tuscaloosa).

LAMAR COUNTY — DeSoto O&G Co.'s Gardner 1, 22-15s-16w, elev 503 ft pb to 3118 ft, wocs, old td 4900 ft, lime.

ARKANSAS

ARKANSAS COUNTY — Ark. Oil Co.'s Fischer 3, ne nw 6-6s-4w, rur.

CLARK COUNTY — B. Tribinhoff, Tr.'s Gibbons 1, sw ne ne 27-8-18, sd 556 ft.

CRAWFORD COUNTY — Trumbo et al's Craddock 1, c nw ne 3-11-30, rur.

GARLAND COUNTY—J. E. Elliott's D. Hauyst 1, ne se nw 22-2s-17w, abn at 94 ft.

HEMPSTEAD COUNTY—Dixie Drlg. Co.'s Vada Wheatley 1, nw sw ne 14-11-26, rur. May & Easton's Conway 1, sw nw sw 20-12s-27w, wocs 12¼ in csg 80 ft. F. W. Martin's Lafferty 2, se nw 17-14-27, coring 1958 ft.

LA FAYETTE COUNTY—Earl F. Fox's Coleman 2, ne ne 30-16-24, elev 271 ft, top Nacatosh 1544 ft, sd 2826 ft. Erwin & Leach's Bodcaw Lbr. Co. 3, nw nw 20-16-23, elev 250 ft, 13⅜-in csg 330 ft, dr 1360 ft. Joe Modisett et al's Frost Lbr. Co. 1 (second hole), sw sw 29-19-24, elev 261 ft, cemtd 9⅝ in csg 1960 ft, td 2100 ft.

MILLER COUNTY—Odell Hinson's Montana Realty Co. 1, ne nw nw 3-17-28, rur. King Oil Corp.'s G. W. Crank 1, sw ne 19-16-25, top Nacatosh 1950 ft, Annona chalk 2365-2735 ft, ran electrical testing device, sd cur titles 4000 ft.

OUACHITA COUNTY—Griggsby & Aarnes' Burris 1, 19-15-19, co to deepen 3050 ft. Phillips Pet. Co.'s J. D. Reynolds 1, 27-15-15, cemtd 13⅜ in csg 619 ft wocs. W. B. Street's Rath & Cartier 1, sw sw ne 33-13-18, 7-in csg 1398 ft, co to deepen, td 1403 ft.

POINSETT COUNTY—Rockwell Dev. Co.'s W. A. Smith 2, ne ne 13-11n-3e, sd 2050 ft.

UNION COUNTY — I. J. Allen's Union Sawmill Co. 1, se nw 8-17-12, dry abn, td 3295 ft. F. C. Henderson's Sheppard 1, ne nw 35-17-15, elev 195 ft, top Nacatosh 2120 ft, dr 2152 ft. J. C. Buckbee, Tr.'s Sloan 2, se nw 14-17-15, spd cemtd 10-in csg 150 ft.

CALIFORNIA

KERN COUNTY

BELRIDGE—Albert Beck's Beck-Bacon 1, 35-28-20, dr shale 1600 ft.

BUENA VISTA LAKE—Ohio's K.C.L. A-5, 31-31-26, dr shale 2160 ft.

COMANCHE COUNTY—Shell's Bank One 1, 15-32-29, sd 5394 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, td 2182 ft, moving in heavier equipment.

DEVIL'S DEN—Cumberland Oil Co.'s Mabry 2, 17-26-18, td 4360 ft, to run formation tester.

EDISON—Navy Oil Co.'s Caravel 1, 19-30-30, td 1447 ft, pumping water, trace of oil. R. & R. Dev. Co.'s R&R 1, 29-30-30, abn 116 ft.

FRUITVALE—Elliott Core Dr. Co.'s Elliott 1, 14-29-27, dr gray sand 3570 ft.

GRAPEVINE—Silver Gate Co.'s Tejon 1, 7-10-19, sd 2985 ft.

GREENFIELD—Speik Oil Co.'s Ricomini 1, 23-30-27, dr gray sand 6100 ft.

KERNELL—Standard's Widgeon 3, 1-25-23, td 4130 ft, bridge 3304-3400 ft, to test.

LOST HILLS—Standard's United 1, 2-26-20, fsh 5857 ft.

McKITTRICK—Belmac Dr. Co.'s Douglas 1, 22-29-21, fsh 4800 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*	owdd—*old well drilling deeper.*
‡—*salt water (completions).*	owpb—*old well plugging back.*
†—*junked and abandoned.*	pb—*plugged back or plugging back.*
¶—*million feet of gas.*	r—*reaming.*
abd—*abandoned.*	rog—*rig on the ground.*
bbls—*barrels.*	rur—*rigging up rotary tools.*
br—*building rig.*	rust—*rigging up standard tools.*
b.s.—*basic sediment.*	sd—*shut down.*
csg—*casing.*	sdtr—*sidetracking.*
co—*cleaning out.*	sg—*show gas.*
dd—*drilling deeper.*	si—*shut in.*
dk—*derrick.*	so—*show oil.*
dr—*drilling.*	so & g—*show oil and gas.*
fsg.—*fishing.*	spd—*spudding.*
ft—*feet.*	sr—*straight reaming.*
hfw—*hole full of water.*	sw—*salt water.*
in—*inches.*	td—*total depth.*
lcn—*location.*	ur—*underreaming.*
m—*milling.*	wih—*water in the hole.*
mim—*moving in materials.*	wo—*workover.*
mit—*moving in tools.*	wocs—*waiting on cement to set.*
mot—*milling on tools.*	wosr—*waiting on standard rig.*
n, s, e, w—*north, south, east, west.*	
oih—*oil in hole.*	

MOUNT POSO—Stabeck & Gardner's Glide 1, 31-27-28, dr shale 750 ft.

MOUNTAIN VIEW—Standard's Garcia 1, 13-30-28, dr shale 3541 ft.

NO. MOUNT POSO—H. McMann's No. 2, 27-26-28, sd 900 ft. Vedder Pet. Corp.'s S. P. 1, 3-27-28, spud.

RIO BRAVO—Ohio's No. 1, 1-30-25, lcn.

SO. BUTTONWILLOW—General's No. 1, 5-30-24, td 5452 ft, co 2067 ft.

STEVENS AREA—Shell's K. C. L. 1, 29-30-26, spud.

MISCELLANEOUS

FRESNO COUNTY—Jas. M. Conlon Co.'s No. 1, 30-19-15, dr sand 85 ft. Seaboard Oil Corp.'s (was Milham) Baston Land Co. 1, 13-20-18, td 3500 ft in shale streaks sand, abn; Lillis-Welch 1, 30-16-14, lcn.

KINGS COUNTY—Royalty Service Corp.'s No. 1, 16-24-18, td 1991 ft, os and shale top Temblor 1920 ft, top os 1920 ft, ran formation tester, to core ahead. Standard's Tulare Farms 1, 34-24-23, lcn. Union's Giannini 1, 28-22-20, dr shale 1737 ft.

MADERA COUNTY—Pure's Chowchilla 2, 8-10-14, td 5592 ft, to replug.

MERCED COUNTY—J. R. Murrell's No. 1, 8-10-9, dr hard sand 750 ft.

SAN JOAQUIN COUNTY—Amerada's F. D. L. 4, 15-2-5, spud.

SAN LUIS OBISPO COUNTY—Emerich Oil Co.'s Holland 1, 22-32-22, td 1840 ft. Bailed oil to pump. Willett Oil Assn's Jack 2, 10-25-15, td 3647 ft to recement 8⅝-in 2940 ft.

TEHAMA COUNTY — Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, co td 5520 ft.

TULARE COUNTY—Kenwood Pet. Corp.'s Kenwood 1, 14-24-27, dr sand 150 ft.

MONTEREY COUNTY—Shell's Branch 1, 34-24-10, dr black and brown shale streaks sand 7218 ft.

SANTA BARBARA COUNTY

CARPENTERIA—Santa Barbara O&G Co.'s Bryce 1, 29-4-25, td 2100 ft, rep. machinery.

CONCEPTION POINT — Union's No. 1, bldg roads.

LOMPOC—M. J. Freeman's La Brea 1, 11-7-33, sd 1450 ft. Lompoc Pet. Co.'s Beauterbough 2, 18-7-34, sd 3940 ft.

NO. MESA—Humphries et al Edna May 1, 26-4-27, sd 1420 ft.

ORELLA—Williams & Brown's No. 1, 34-5-31, lcn.

SUMMERLAND—Marmonte Oil Co.'s No. 1, 16-4-26, sd 1600 ft.

VENTURA COUNTY

BARDSDALE—Bestco Pet. Co.'s No. 1, 2-3-19, rur. Duke Oil Corp.'s No. 1, 7-3-19, td 2000 ft, cement plug at 1925 ft. El Rancho Oil Co.'s Elkins 1, 9-3-19, sd 1083 ft. Union's Dryden 10, 12-3-20, td 5758 ft.

OJAI—Continental's Pirie 2, 12-4-23, td 1017 ft, wocs 11¾ in 473 ft.

PADRE CANYON—Continental's Hobson 1, 15-3-24, dr sand and shale 5141 ft, showing oil.

PIRU—Bolsa Chica Oil Corp.'s Snow 3, 4-4-18, dr shale streaks sand 212 ft.

SANTA PAULA — High Mesa Oil Co.'s Butcher 1, 16-4-22, sd 650 ft.

SHIELLS CANYON — Bankline Oil Co.'s Calumet B-2, 3-3-19, td 3606 ft, streaks oil sand, running formation tester. Texas Co.'s Shiells 129, 4-3-19, spud Jan. 13, dr.

SIMI—Dawson Oil Co.'s No. 1, 8-2-17, dr gray sand 2100 ft. Jas. S. Hull's No. 1, 2-2-18, td 1490 ft, repairing machinery. Paloma Oil Co.'s Paloma Marr 1, 12-2-18, sd 2806 ft.

SO. MOUNTAIN—Calco Pet. Corp.'s Calco 3, 17-3-20, rur.

VENTURA—Ventura Explor. Co.'s Sexton 1, 30-3-22, sd 7068 ft.

SOUTHERN CALIFORNIA

ARTESIA—Vanco Dev. Co.'s Millard 1, 25-3-12, td 5888 ft, plug 5130 ft. To set 8⅝ in at 4845 ft, while co stuck dr pipe, circulating.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-8, td 3053 ft, perforating 7 in 1120 to 1450 ft.

DOMINGUEZ—West American Oil Co.'s Del Amo 1, 3-4-13, dr sandy shale 5264 ft.

EL SEGUNDO—L. J. Marvin's Woods 1, 7-2-14, td 6359 ft, to dr deeper, new foundations.

HUNTINGTON BEACH—20th Century Oil Co.'s Calnan 1, 36-5-11, td 5118 ft, rigging to dr deeper.

KRAEMER—T. W. Cooke, Dr. & Service Co.'s Cooke 1, 25-3-9, co 2659 ft. Lease Holders Dev. Co.'s Vejar 1, 26-3-9, sd 4110 ft. Standard's Yorba Com. 1, 36-3-9, td 2714 ft, redr to 2696 ft, plug 500 to 1981 ft, to redr.

LAWNDALE—Sovereign Oil Corp.'s Ben Long 1, 22-3-4, co 8760 ft.

NEWHALL—Yant Pet. Corp.'s No. 5, 1-3-16, sd 1070 ft.

NEWPORT—Commander Oil Co.'s Mesa 1, 29-6-10, dr sand and shale 586 ft.

NO. LONG BEACH—Geo. L. Clayton's No. 1, 31-3-12, td 6765 ft, wocs, 4¼ in 4700 ft.

PICO CANYON—N. M. Fraser's No. 1, 31-4-16, td 955 ft, pumping water.

PUENTE—North American Oil Consolidated's Smith 3-1, 31-1-10, abn 5952 ft. Chas. R. Butler's Butler 1, 14-2-10, dr shale streaks oil sand 2578 ft.

TOPANGA CANYON—Monarch Pet. Co.'s Sylvia Park 1, 5-1-16, td 650 ft, co.

TORRANCE—Eyer Pet. Corp.'s No. 1, 20-4-13, sd 3100 ft. Oliver McDowell's No. 1, 35-3-14, sd 4633 ft. Pioneer Holding Co.'s Pioneer 1, 33-3-14, se 4317 ft.

VENICE-DEL REY—Eastern Oil Co.'s Del Rey Land & Water Co. 1, 22-2-15, dr shale 1794 ft.

WEST LONG BEACH—Shell's Amebco 1, 13-4-13, dr gray sand streaks shale 5131 ft.

WILMINGTON — McAdams Explor. Co.'s Palos Verde 1, sd 4496 ft.

YORBA LINDA — Continental's Carlton Com. 1, 21-3-9, dr hard sand 1074 ft.

RIVERSIDE COUNTY—Albert Pet. Co.'s Watt 2, 23-7-3, td 2785 ft, plug 2200 ft, trying to locate water. Fred E. Stevens' Everett 1, 27-3-7, lcn.

SAN BERNARDINO COUNTY—Equitable Pet. Explor. Co.'s No. 1, 11-10-5, td 1999 ft, ran 8⅝ in casing with 170 ft perforated on bottom, landed on bottom and cemented at 1829 ft.

FLORIDA

JACKSON COUNTY—Mrs. Mamie Hammonds et al's Grandberry 1, sw ne 15-5n-9w, mir.

HILLSBOROUGH COUNTY — Southern Pet. Co.'s Mizell & Williams 1, se ne 4-32s-21e, elev 120 ft, dr 2655 ft.

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 1, se se 17-24s-25e, elev 120 ft, 9⅝-in csg re-cemtd at 2200 ft, td 2258 ft, arr re-test td 2258 ft, Argillaceous limestone.

KANSAS

BARTON COUNTY—Witt et al's Murry 1, nw nw sw 14-17s-14w, td 3477 ft, D & A. Torrey & Feaster et al's Kempler 1, se ne ne 31-18s-11w, dr 3340 ft. Yarnell, Carlson & Spencer's Bloomer 1, ne ne nw 36-17s-11w, dr 2275 ft. Morgan & Flynn et al's Amerine 1,

ne ne ne 14-19s-14w, dr 1865 ft. Morgan & Flynn et al's Zimmer 1, se se sw 30-19s-14w, woc at 310 ft. Buchanan & Alexander's Langford 1, ne ne sw 14-20s-11w, dr 81 ft. Geo. W. Hinkle's Smith 1, sw nw nw 1-17s-11w, mim. Roy Ramsey et al's Hunt 1, nw nw nw 10-18s-11w, lcn. Earl Wakefield & T. C. Johnson's Bumm 1, sw sw ne 22-19s-12w, lcn.

BUTLER COUNTY — Pryor & Lockhart's Boucher 1, nw nw nw 19-27s-4e, dr 800 ft. National Ref. Co.'s McCullough 1, ne ne sw 1-28s-6e, dr 2445 ft.

COWLEY COUNTY—Aylward, Trees Oil Co. et al's Shields 1, sw sw sw 17-32s-6e, dr 1890 ft. Roth & Farout's Sherwood 1, ne nw sw 11-31s-4e, dr 2292 it. Penwest's Clover 1, ne se se 8-31s-7e, dr 1805 ft. Reed & Milligan's Houston 1, nw nw sw 10-31s-4e, dr 2035 ft. Trees Oil Co.'s Garber 1, ne ne sw 28-31s-5e, td 3097 ft, D & A. Winkler-Koch et al's Harlen 1-B, cs¼ nw ne 13-31s-7e, so 2550 ft. Earl Wakefield's Wilson 1, nw nw nw 4-32s-3e, cellar.

GRAHAM COUNTY—Vickers Pet. Co. et al's Hutton 1, ne ne se 29-8s-22w, sd 1375 ft.

GREENWOOD COUNTY — Mohawk Oil Co.'s Edgar 1-A, ne ne sw 2-28s-8e, td 2548 ft, swab 3 bbls oil. Anderson & McGinnis' Jensen 1, se se sw 30-23s-12e, dr 1770 ft. N. C. Dunn's Dawson 1, cnw ne 27-26s-13e, sd 925 ft. Hale & Reese's Neeldes 1, ne sw nw 12-25s-10e, rig.

HARPER COUNTY—Marathon's Zellers 1, csw nw 17-35s-8w, dr 4080 ft.

HARVEY COUNTY—Ok-Tex et al's Osborne 1, cse se 6-23s-3w, dr 3630 ft. Empire & Ryan Drlg. Co.'s Webster 1, se se sw 8-24s-2w, dr 90 ft. Harburney Oil Co.'s Schrag 1, nw nw se 24-22s-3w, otd 587 ft, set 15-in csg 271 ft, co.

HASKELL COUNTY—Helmerich & Payne's Elliott 1, csw¼ 30-29s-33w, sso 2747 ft.

MARION COUNTY—Milton et al's Young 1, nw nw se 17-21s-3e, br.

NORTON COUNTY — Lario and Elwell's Kennedy 1, sw sw nw 22-3s-23w, ur 10-in csg 2688 ft. Helmerich & Payne et al's Collins 1, cne¼ 11-3s-25w, spd.

PRATT COUNTY—Skelly et al's Gilchrist 1, cse¼ 7-28s-11w, co 4244 ft. Lario, Elwell and Atlantic's Lemon 1, se se nw 12-29s-13w, dr 1335 ft.

RENO COUNTY—Foraker et al's Hiett 1, se sw ne 34-24s-4w, sd 1770 ft. Olson Drlg. Co. et al's Krantz 1, ne ne se 13-25s-5w, td 4128 ft, D & A. McPherson and Derby's Schuechzer 1, ne se sw 17-23s-4w, rust 3362 ft. Rose Spring Drlg. Co. and Foraker's Brauer 1, sw sw se 4-26s-4w, rust 4070 ft. Darby's Schrock 1, se se sw 27-24s-5w, dr.

RICE COUNTY—Permian Oil Co.'s Conner 1, cne ne 28-19s-7w, td 3640 ft, pb 3210 ft, testing. Skiles et al's Edwards 1, nw nw ne 3-18s-8w, td 3281 ft, pumped 45 bbls oil. Day's Mason 1, nw ne ne 26-21s-7w, td 3400 ft, 700 ft oih 5 hrs, no test. Vernon and Cusco Oil Co.'s Boldt 1, nw sw nw 10-19s-10w, dr 2430 ft. Gratton et al's Williams 1, sw sw nw 17-18s-7w, spd & sd. Franco-Central et al's Shonyo 1, sw sw ne 11-18s-10w, dr 3030 ft. Continental and Empire's Nickel 1, ne sw sw 13-18s-8w, lcn. Tabor-Coleman and Atlantic's Tharp 1, cnw nw 33-21s-6w, dr 3495 ft.

ROOKS COUNTY—Gillespie & Son's Low 1, ne ne nw 12-6s-18w, sd 3162 ft. Murfin et al's Wasthusin 1, ne ne se 12-6s-18w, dr 600 ft. Pryor & Lockhart's Bradley 1, sw sw ne 31-10s-16w, dr 855 ft.

RUSSELL COUNTY—Phillips and Sinclair Prairie's Driscoll 1, nw nw se 31-15s-11w, dr cement. Coraleana Oil Co.'s Diskon 1, se se se 30-15s-13w, fsg 3000 ft. Warren Pet. Co.'s Bratton 1, se se se 25-11s-13w, ur 6-in csg 2978 ft. Central Pet. Co.'s Benso 1, se se sw 9-14s-15w, co 2390 ft. Sam Murphy et al's Enochutz 1, sw sw sw 10-15s-13w, sd 2565 ft. Hartman & Blair's Boxberger 1, nw nw sw 32-13s-14w, dr 1780 ft. Eisenhour & Shaffer's Humes 1, sw sw sw 6-14s-12w, rig. Torrant's Williamson 1, se se nw 9-14s-14w, dr 2425 ft. Reynolds' Fredrickson 1, se sw se 6-13s-12w, dr 380 ft. Empire et al's Major 1, se se se 11-14s-12w, br. Bridgeport Machine Co. and Lauck's Wyckoff 1, se nw ne 27-11s-13w, br. Chas. Newbold's Krug 1, se sw se 4-15s-14w, lcn.

SEDGWICK COUNTY — T. C. Johnson's Jensen 1, sw sw nw 11-28s-2e, br.

STAFFORD COUNTY—Herndon Drlg. Co. et al's Russell 1, cse nw 20-21s-14w, co 3770 ft. Farris et al's Snyder 1, se se nw 3-21s-11w, dr 960 ft.

SUMNER COUNTY—Pulse's Buss 1, nw nw nw 12-32s-2w, td 3535 ft, abn. Helmerich-Payne's Wright 1, se se nw 10-33s-2e, rust 3495 ft. Husted et al's Evers 1, se se ne 27-31s-2e, sd 200 ft. Morgan et al's Veail 1, se sw ne 27-32s-2e, dr 1670 ft.

TREGO COUNTY—Vickers et al's Secor 1, nw nw nw 25-15s-24w, sd 4726 ft. Central Commercial's Wagg 1, nw nw se 17-13s-21w, dr 3441 ft.

WOODSON COUNTY—Morgan et al's Vermont Savings Bank 1, ne nw ne 15-25s-14e, sd 900 ft. Sheedy et al's Warner 2, sw sw sw 21-25s-14e, td 1470 ft, est 12 bbls oil. Lewis et al's Riggs 1, sw sw sw 10-26s-14e, sd 900 ft.

SOUTH LOUISIANA

ACADIA PARISH — Woodley Petroleum Company & Superior Oil Producing Co.'s M. Savoy 1, Bayou Mallett prospect, sec 47-7s-1e, dr shale 4031 ft.

CALCASIEU PARISH — Union Sulphur Co.'s Prairie Farms 2, South Lake Charles prospect, sec 2-11s-9w, dr shale 3475 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Pegnuer 274, Jefferson Island dome, 12-5e, woc 8347 ft.

JEFFERSON DAVIS PARISH — J. R. Lewis' Lock Moore 1, Heckner prospect, sec 32-7s-6w, moving in heavy rig. Shell's Lacassine Irrigation Co. 1, Hayes prospect, sec 20-11s-5w, dr shale 9006 ft.

PLAQUEMINES PARISH — Souther Sulphur Co.'s Manhatten Fruit Co. 1, Venice dome, sec 26-21s-30e, dr shale 3290 ft.

ST. JAMES PARISH — Shell's Colonial Sugar Co. 1, Convent prospect, sec 5-12s-5e, dr shale 2309 ft.

ST. MARTIN PARISH—Texas Co.'s Lake Mengouloi 1, Lake Mengouloi prospect, sec 10-9s-9e, abd 7548 ft. Texas Co.'s St. Martin Land 8, Henderson propect, sec 9-8s-7e, woc 1348 ft.

TERREBONNE PARISH — Shell's Realty Co. 1, Houma Townsite prospect, sec 103-17s-17e, dr sand no shows 8469 ft.

VERNON PARISH — Llano Oil Corp.'s Llano 1, sec 7-1n-9w, reinforcing dk at 2560 ft.

WEST FELICIANA PARISH — Southern Minerals Corp.'s Wood 1, nw of St. Francisville, sec 54-1s-4w, dr shale 830 ft.

NORTH LOUISIANA

BIENVILLE PARISH—DeSoto O&G Co.'s Mower 1, ne ne 9-16n-10w, rur. Lide & Greer's Davis Lbr. Co. 1, ne se 12-16n-5w, top Wilcox 575 ft, top Nacatosh 2395 ft, top hd chalk 2528 ft, wocs, 10-in csg 2586 ft, td 2600 ft. Texas-Seaboard Oil Co.'s McGee 1, sw ne 3-16n-6w, elev 217 ft, top Arkadelphia 1980 ft, 10¾-in csg 2299 ft, sd installing new machinery 3917 ft.

BOSSIER PARISH—L. R. Baker et al's (formerly McKinney & Humphrey) Bulkley 1, ne sw 36-21n-13w, top Nacatosh 1186 ft, dr 1521 ft, chalk.

CALDWELL PARISH—Critchett & Wood's Kyle 2, 18-11n-3e, sd 1290 ft.

CLAIBORNE PARISH—E. T. Oakes et al's Patton Est. 1, ne ne 1-20n-5w, arr deepen 4238 ft. Ryan Oil Corp.'s Gladney 1, ne sw 27-20n-7w, elev 343 ft, anhydrite 4485-4960 ft, sd 5007 ft. Sugar Creek Synd's Darrett 2, 31-21n-5w, dr 5433 ft.

DE SOTO PARISH—Alexander et al's Stell 1, nec 5-12n-16w, elev 245.6 ft, top Annona chalk 1750 ft, dr 4802 ft, lime & shale.

JACKSON PARISH—Caldwell L&T Co.'s Burroughs Est. 1, ne nw 1-17n-1w, rur. G. W. Zeigen's La. Cent. Lbr. Co. 3, 26-14n-1w, lcn.

LINCOLN PARISH—Caldwell L&T Co.'s Hammons 1, nw ne nw 30-18n-1w, rur. Lide & Greer's T. L. James Co. 1, 9-17n-4w, ru & sd. S. Gardner 1, wocs surf csg. Eastern Texas Prod. Co.'s Givens 1, 2-17n-4w, cwdd, td 3505 ft.

UNION PARISH—Lent, Bocher & Sears' Frost Lbr. Co. 1, nec 27-21n-1e, mim.

WEBSTER PARISH—Ohio Oil Co.'s R. L. Holloway 6, ne sw 23-21n-10w, 15¾-in csg 560 ft, dr 5026 ft. J. L. Edwards' Hooper 1, nw sw 8-17n-9w, sd 1260 ft. Red Hawk Oil Co.'s Mayfield 1, 9-23n-9w, lcn abnd.

WINN PARISH—P. E. Parsons et al's Tremont Lbr. Co. 1, nw sw 10-12n-2w, elev 209.4 ft, top Wilcox 1280 ft, top Midway 2825 ft, so dead oil in sand 2823-25 ft, core 2855 ft.

MICHIGAN

ALPENA COUNTY—C. W. Teater's Nevins 1, 32n-6e-18, sd 60 ft.

ALCONA COUNTY—Thalman and Morris' Kohlman 1, 26n-7e-10, dr 2000 ft.

ANTRIM COUNTY—McClanahan Oil Co.'s Pearson 1, 31n-5w-4, dr 1300 ft.

CLINTON COUNTY—Stork Oil Co.'s Bross 1, 8n-2w (Greenbush twp), ne sw ne-29, lcn.

EATON COUNTY — Burris and Keeler's Moon 1, 2n-4n-11, rig.

GLADWIN COUNTY—Goll, Graves, Mechling's Kent 1, 17n-1e-23, rig.

GRATIOT COUNTY—Miller Brothers' Ryan 1, 9n-1w-22, sd 2370 ft. Harley William's Smith 1, 9n-2w-29, sp. Mountain Oil & Gas Co.'s Walter 1, 11n-2w-17, dr 400 ft.

HURON COUNTY—Wallace Markle's Opaka 1, 15n-11e-4, sd 2700 ft.

IONIA COUNTY—Associated Pet.'s Reisendorf 1, 7n-8w-8, dr 700 ft. Wittmer Oil Co.'s Kimball 1, 7n-5w-15, dr 2700 ft.

LAKE COUNTY—C. W. Teater's McCabe 1, 20n-12w-26, sd 830 ft. Frank Lyon's Alderton 1, 17n-13w-33, dr 2700 ft.

LENAWEE COUNTY — Socony-Vacuum's McCarberry 1, 5s-5e-36, test sg & o 2550 ft. Mott & Denman's Huffman 1, 6s-3e-26, dr 200 ft.

MASON COUNTY—Dragoon Dev.'s Young 1, 17n-15w-15, dr 2700 ft. Max Prey's Barothy 1, 17n-15w-29, dr 2500 ft.

MECOSTA COUNTY — Taggart Bros' McKeough 1, 14n-9w-2 dr 2700 ft.

MIDLAND COUNTY—J. V. Wicklund's Roher 1, 16n-1w-7, rig.

MISSAUKEE COUNTY — M. J. Ingold's Donley 1, 22n-8w-31, sd 850 ft.

MONROE COUNTY—A. V. Oil Co.'s Roe 1, 6s-6e-19, dr 600 ft.

MONTCALM COUNTY — Starr Petroleum Co.'s Ward 1, 9n-5w (Bloomer twp), ne ne nw-20, mi. Jetter Oil Co.'s McCracken 1, 9n-5w-6, rig. Old Dutch Oil Co.'s Hansen 1, 10n-7w-21, dr 1600 ft.

NEWAYGO COUNTY—E. M. Neff's Sipley 1, 16n-13w-26, sd 2450 ft. J. G. Buell's Smith 1, 14n-11w-29, dr 2950 it. Triangle Oil Co.'s Vera 1, 14n-12w-5, rig.

SAGINAW COUNTY—St. Louis Pipe's Yadovack 1, Brant twp, 10n-2e, se ne se-13, dr 550 ft. Pure Oil Co.'s Blumer 1, 12n-1e-10, sp. Henry McEvoy's Jenacki 1, 12n-2w-31, sp.

TUSCOLA COUNTY — Bancroft Oil Co.'s Humes 1, 11n-8e-21, rig.

MISSISSIPPI

CLAIBORNE PARISH — Mississippi Dev. Co.'s Crawford 1, 6-13n-4e, spd & sd.

HARRISON COUNTY—Big Ridge Oil Co.'s Hingin 1, sw se se 13-7s-10w, dr 2050 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Fox 2, 31-7n-12w, dk.

LAMAR COUNTY—Snow-Black Pet. Co.'s Miller et al 1, ne ne sw 3-4n-15w, dk.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 3, 14-14n-1e, arr dr plug in 6¾-in csg at 3105 ft, td 3110 ft.

WILKINSON COUNTY—Chas. Green, Tr.'s Foster Creek Lbr. Co. 1, C se 8-3n-1e, 16-in csg 60 ft, 10¾-in csg 615 ft, dr 1200 ft.

WINSTON COUNTY—Jack Vale's Moody 1, sw nw sw 3-13n-14e, elev 540 ft, 6-in csg 2216 ft, dr 2800 ft, sand rocks.

NEW MEXICO

LEA COUNTY—Barnsdall Oil Co. et al's D. C. Hardy 1, c se ne 29-21s-37e, elev 3470 ft, stdz at 1265 ft, dr 2430 ft. Amerada's State 1-K, c se nw 29-19s-37e, dr 1240 ft. Amon G. Carter and Crafton Oil Co.'s M. A. Hair-

DOWELL INCORPORATED

Will be glad to receive applications from men experienced in oil production and interested in positions as acidizing engineers. Applicants must have college training and actual experience in some phase of oil production work, and must be between twenty-five and thirty-five years of age. Applications will be considered by letter only, and must contain education and experience records as well as satisfactory references. Personal interviews will be arranged later. All applications will be treated confidentially. Please address

529 KENNEDY BUILDING **TULSA, OKLAHOMA**

Humble 1, c sw nw 11-24s-37e, elev 3231 ft, top anhydrite 990 ft, top salt 1220 ft, dr 2885 ft. Gypsy Oil Co.'s Annie L. Christmas 1, c se se 27-22s-36e, elev 3521 ft, dr 1400 ft. Harry Leonard et al's B. T. Lanehart-Humble 1, c sw ne 21-25s-37e, sp and sd. Maljamar O&G Corp.'s Baish 6, c sw se 21-17s-32e, Maljamar area, dr 510 ft. Ohio's State 1, c sw se 30-19s-37e, Monument area, lcn. Repollo Oil Co.'s J. R. Phillips 1, swc 31-19s-37e, Monument area, elev 3585 ft, td 3899 ft, running 2½-in tubing to 3854 ft; J. H. Williams 1, nec 33-19s-37e, Monument area, elev 3587 ft, base salt 2530 ft, rust to drill in, td 3800 ft. Skelly's W. H. King 1, c ne sw 6-23s-37e, elev 3382 ft, dr lime 3705 ft; B. L. King 1, c sw se 32-22s-37e, cem surface cas; J. U. Baker 1, c se sw 22-22s-73e, rotary rig; Hugh O. Simms 1, c sw ne 4-23s-37e, elev 3323 ft, cem 7-in cas 3392 ft, td 3474 ft, rust to drill in; Edgar L. Steeler 1, c nw ne 17-23s-37e, elev 3333 ft, cem 7-in cas 3385 ft, dr with cable tools 3510 ft; R. R. Simms 1, c se se 4-23s-37e, rotary rig. Texas Co.'s J. M. Dean-Pure 1, c se sw 28-22s-36e, elev 3498 ft, top anhydrite 1330 ft, cored oil saturation in lime and sandy-lime 3640-3810 ft, used 4000 gals acid then shot 350 qts nitro 3733-3810 ft, swabbed 27 bbls fluid 20 hrs, then used 6000 gals acid, no results, dr to 3922 ft, testing. Warren L. Todd, Inc.'s Lemon 1, c nw se 17-21s-32e, rust. Sam K. Vierson & Brown's W. D. Robinson 1, c nw se 14-11s-32e, elev 4355 ft, top anhydrite 1474 ft, top salt 1506 ft, top brown lime 3465 ft, cem 7-in cas 3680 ft, tested salt w on dst at 4154-4224 ft, dr 4400 ft.

OKLAHOMA

ALFALFA COUNTY—Tex-O-Kan's Acre 1, csw ne 14-24n-11w, coring 7269 ft.

ATOKA COUNTY—Vierson et al's Williams 1, ne sw nw 34-2s-10e, dr 3676 ft.

BEAVER COUNTY—Anderson-Kerr et al's Davis 1, csw se 36-5n-26 ECM, dr 6102 ft.

BECKHAM COUNTY—Benonine Oil Co.'s Smith 1, sw sw sw 17-8n-25w, td 2188 ft, D&A. Wood Pet. & Royalty Corp.'s Blair 1, nw nw se 32-9n-26w, sd 315 ft.

CADDO COUNTY—Denver P&R Co.'s Sah-Cam 1 cse se 33-10n-10w, dr 9790 ft. Turner et al's Sapin 1, ne ne sw 1-5n-11w, sd 3440 ft.

CARTER COUNTY—Texas Co.'s Cathey 1, se ne ne 6-5s-1w, ready to dr plugs. Carter's Humble-Williams 1, sw ne sw 27-2s-3w, pb 6850 ft, whipstock 6089 ft, to dd. Southern States Oil Co.'s Moore 1, ne se nw 30-4s-1w, dr 55 ft. Schermerhorn Oil Co.'s Floyd Clowdus 1, nw nw ne 2-4s-2w, dr 300 ft.

CLEVELAND COUNTY — Mid-Continent's Butler 1, sw nw sw 7-3n-1e, td 4933 ft, D&A.

COAL COUNTY—Carter et al's Thompson 1, csl ne nw 34-2n-9e, dr 7060 ft. Southern Oil Co.'s Fish 1, sw sw sw 6-1s-8e, sd 1575 ft. Shell's Hill 3, se se nw 30-3n-10e, dr 1540 ft.

COMANCHE COUNTY — Pace et al's Spencer 1, sw sw sw 21-3n-10w, dr cement & bailing. John Nicholas' Hauseholder 1, ne ne sw 8-2n-10w, sd 959 ft.

COTTON COUNTY—Grace & Woods' Alva Henderson 1, ne se se 27-4n-11w, dr 1388 ft.

GARFIELD COUNTY—Sherry et al's Hoken 1, nw nw sw 32-20n-4w, dr 2280 ft.

GARVIN COUNTY—Suggett & McElreath's Hyre 1, ne ne se 23-3n-1w, dr 1320 ft.

GRANT COUNTY—Southern Oil Co. et al's Allen 1, sw sw se 36-26n-4w, dr 5314 ft.

HUGHES COUNTY — Schumacher et al's Schumacher 1, ne nw ne 23-5n-10e, dr 1423 ft. Halsey's Eastep 1, nw nw sw 11-8n-9e, 6-in dr pipe cemented, wocs. Canavan's Meadors 1, ne se sw 5-8n-10e, dr 2740 ft.

JACKSON COUNTY—Universal Oil Co.'s Briscoe 1, nw sw ne 36-1s-20w, dr 300 ft. Jackman's Fee 1, sw sw sw 27-1s-24w, dr 723 ft.

JEFFERSON COUNTY—Heydrick's Seay 1, se nw nw 31-6s-5w, fsg 1737 ft. Sinclair Prairie's Barrett 1, nw nw nw 31-5s-6w, rur. Geo. Pace's Gardner 1, sw sw sw 23-5s-5w, sd 600 ft. Campbell Trout 1, se ne ne 6-8s-7e, dr 1300 ft.

JOHNSTON COUNTY—Moore & Wirick's Westheimer & Daube 1, se nw ne 19-3s-4e, sd.

KAY COUNTY—Black Gold Pet. Co.'s Cooley 1, ne nw sw 25-28n-4e, sd 350 ft.

KIOWA COUNTY—Beeler & Klein's Van-Kirk 1, ne ne sw 35-7n-15w, td 607 ft, pb 380 ft, testing. Burns & Moore's Webster 1, cne ne 2-6n-17w, dr 380 ft. Shaffer et al's Slusher 1, nw sw nw 35-7n-17w, lcn.

LE FLORE COUNTY—McGraw et al's Tidwell 1, cnw se 17-3n-22e, sd 1155 ft.

LINCOLN COUNTY—Texas Co.'s Vanderpool 1, nw sw se 11-16n-3e, td 4795 ft, D & A. Stanolind-Amerada's Crawford 1, ne ne se 35-15n-2e, td 5229 ft, est 700 to 800 bbls oil. Texas Co.'s Andrew 1, nw ne se 28-14n-5e, dr 3928 ft.

LOGAN COUNTY—Stanolind-Amerada and Eason's Gragg 1, sw sw ne 20-18n-4w, rust 5860 ft. Spring Rose Drlg. Co. et al's Wright 1, sw sw nw 32-15n-1e, dr 5462 ft.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, td 7165 ft, whipstock 5406 ft. Amerada and Stanolind's Westheimer & Daube 1, sw se sw 27-6s-2w, dr 4692 ft. Russell et al's Scott 1, sw se sw 29-8s-2e, lcn.

MARSHALL COUNTY—Singley's Vickers 1, nw sw nw 22-7s-4e, dr 245 ft. Singley et al's Halford 1, sw se sw sw 22-7s-4e, dr 400 ft. Smith's Chestnut 1, ne ne ne 23-8s-5e, sd 275 ft. Stennette et al's Lidecker 1, se se nw 7-8s-6e, dr 240 ft.

McLAIN COUNTY — Arab Pet. Corp.'s Autry 1, nw nw nw 16-7n-3w, dr 6200 ft.

McINTOSH COUNTY—I.T.I.O. Co.'s Toncred 1, sw sw ne 9-9n-14e, td 2967 ft, rng pipe.

MURRAY COUNTY—Hernsby & Jones' Sadler 1, ne ne nw 20-1n-2e, sd 1680 ft.

OKFUSKEE COUNTY—Sherry's Washington 1, sw sw ne 21-13n-7e, fsg bailer. Geo. Manahan & W. D. Grisso's Dalton 1, se se se 36-10n-8e, rig.

OKLAHOMA COUNTY—Sinclair Prairie's Corbett 1, ne nw ne 17-13n-3w, dr 6100 ft. Mid-Continent Pet. Corp.'s Dahl 1, ne ne nw 8-13n-3w, td 6762 ft. Sinclair Prairie's Heavey 1, ne ne nw 17-13n-3w, dr 6045 ft.

PAYNE COUNTY—Pierce's Kihega 1, sw sw sw 7-17n-1e, cellar.

PONTOTOC COUNTY—Gypsy's Emry 1, sw sw ne 15-2n-6e, dr 5567 ft. Delaney et al's Hillsdale 1, se se ne 35-4n-6e, dr 1834 ft. Patsy Oil Co.'s Magnuson 1, sw se se 23-2n-7e, td 3572 ft, D & A. Pioneer O&G Co.'s Bayne 1, se sw sw 16-5n-6e, pb 2760 ft, pumped 7 bbls oil. Mid-Texas Pet. Co.'s Harbet 1, sw sw se 30-5n-4e, rig.

POTTAWATOMIE COUNTY — Magnolia's Devault 1, sw nw se 22-6n-4e, dr 1300 ft.

ROGER MILLS COUNTY—Anderson & Kerr et al's Teeter 1, cse se 2-17n-25w, sd 6267 ft.

SEMINOLE COUNTY—Felmlee & Nichaelson's Belford 1, se nw ne 15-9n-8e, fsg 1525 ft.

STEPHENS COUNTY—Clyde Rhodes et al's Doak 1-A, sw sw sw 1-1s-5w, woc at 40 ft.

TILLMAN COUNTY—Gypsy's Schenck 1, se nw se 31-1s-16w, sd 2970 ft. Chas. Walker's Gale 1, ne ne nw 16-1s-19w, lcn abd.

WASHITA COUNTY—McWhirter et al's Fee 1, sw sw sw 34-8n-19w, sd 1347 ft.

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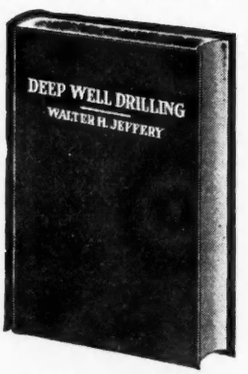

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BURLESON COUNTY—Carl Dyer et al's Young 1, s of Caldwell, J. Bird sur, sd 1740 ft. Walter Blumenthal's Crain 1, se of Rockdale, W. C. Pierce sur, dr shale 3490 ft.

CHAMBERS COUNTY—Black Gold Pet. Co.'s Barrow 1, Jackson Lake prospect, R. Barrow, sur, dr shale 6538 ft.

COLORADO COUNTY — Coyle-Concord's Powell 2-B, Garwood area, I. & G. N. sur, sec 45, dr shale 6230 ft.

GALVESTON COUNTY — Sun's J. E. Hughes 1, Green Lake prospect, W. C. M. Baker sur, dr shale 7808 ft.

HARDIN COUNTY—Republic Prod. Co.'s Burrell Fee 1, n of Silsby, A. A. Burrell sur, dr shale 5918 ft.

HARRIS COUNTY—A. C. Hill's Swilley 1, Sheldon prospect, Victor Blanco sur, sd 6891 ft; same operator's Swilley 1-B, Victor Blanco sur, sd 7550 ft. Texas Gulf Producing Co.'s Westmoreland 1, Bellaire prospect, J. H. Pier sur, dr shale 7659 ft. Cockburn Oil Corp.'s Tompkins 1, Burnett Bay, N. Lynch sur, dr shale 1834 ft.

JEFFERSON COUNTY — Glenn H. McCarthy's Howeth 1, Little Pine Island prospect T. & N. O. sur, sec 70, abd 8015 ft. Humble's E. Langham 1, Amelia prospect, C. Williams sur, coring ahead at 6791 ft. Sun's Broussard 1, Labelle prospect, B. Blackmon sur, heaving shale 8824 ft. Tatum & Pendigrass's Owens 1, n of Port Arthur, sd 1850 ft.

MATAGORDA COUNTY — Continental's Feife 1, Citrus Grove prospect, J. S. Chriswell sur, fsh 7541 ft. John Deering's Estille et al 1, Cedar Lane prospect, Tone & Jamison sur, fsh 6519 ft. Hamman Exploration Co.'s Cleveland 1, one and half mi se of Bay City. E. Hall sur, dr shale 8633 ft. Helmerick & Payne's Hawkins 1, Sheppards Mott, D. A. McCarthy sur, dr shale 7796 ft. Sterling's Baer 1, sw of Sargent, S. Hoit sur, sd 6010 ft. Sun's Craig 1, s flank of Hawkinsville dome, T. Williams sur, dr shale 4850 ft.

MONTGOMERY COUNTY — W. C. Battaille's D. H. Caswell 1, 4 mi s of Conroe field, D. Davis sur, dk. Jack Frazier's Maxey 1, Goodwin area, James Brown sur, dk. Chapman & Smith's Delta Land 1, Dacus area, T. Sheppard sur, dr water well. Wm. Thompson et al's Scott 1, F. Wheeler sur, dr shale 2310 ft.

ORANGE COUNTY—Blue Line Oil Co.'s Peet 1, n of Orange, R. Ballew sur, dr shale 2611 ft.

POLK COUNTY—J. T. Lightfoot's Lynch Davidson 1, ne of Corrigan, Houston County School Land sur, dr shale 137 ft.

SAN JACINTO COUNTY — Cockburn's Cruse 1, Keno prospect, H. & T. C. sur No. 103, dr shale 3675 ft; same operator's K. Moore 1, n of Rayburn, J. F. D. Rumayor sur, dr shale 3920 ft. C. Gholson & L. Decker's Randolph 1, Evergreen area, V. Flores sur, dk. Ralph Stern & Gulf's R. B. Love Est 1, nw of Cold Springs, D. McGee sur, abd 5670 ft.

WALKER COUNTY—Neuva Petrolia Co.'s Tonty Lbr. Co. 1, New Waverly area, J. C. Harrison sur, dr shale 2381 ft.

WHARTON COUNTY—Pure's E. Paige 1, Blue Basin prospect, J. Pirie sur, sd 7676 ft.

SOUTH TEXAS

ARANSAS COUNTY—Buchingham Oil Co.'s McCampbell 1, lots 8 and 9, sec 41; lots 8 and 9, sec 42, McCampbell subd., James Orick sur, 2 miles nw of Aransas Pass, 8 ft from San Patricio County line, set 300 ft sur csg, wocs.

ATASCOSA COUNTY—R. C. Lee, Trustee (Atascosa Trust), U. A. Doumch, 1, 152-acre tr, blk 10, J. T. Russell sur No. 1222, 3 miles n Poteet, sd 1300 ft. R. McIntyre's San Antonio Land Bank (H. A. Billinck) 1, J. B. Woodleff sur No. 246, 7½ mi e Coughran, dr 1910 ft. L. L. Motes, trustee's Atascosa Co. Subd. 1, 425-ac tr, John McNeil sur No. 1191, dr 750 ft.

BASTROP COUNTY — A. W. Phillips' Vaughn Lumber Co. 1, 1110-ac tr, F. Sartuche sur No. 10, 5 mi ne Bastrop, sd 54 ft.

BEE COUNTY—Geo. M. Church's Webb-Hearn 1, in 92-ac lease, E. Ryan sur, 2000 ft se disc well Beeville field, cleared hole 5935 ft, set 7-inch casing to bottom, prep to dr plugs & perf 5900-14; G. A. Ray 1, Anna Burk sur, 2 mi e Beeville, sd 692 ft. H. A. Pressey's R. T. Hicks 1, 1120-ac tr, Jose M. Uranga gr, ab 668, 4½ mi s of Normana, ru. G. M. Richardson et al's Mengers 1, center w 100-ac of W. R. Ryan 500-ac tr, Wm. Allen sur, near Tynan, dk.

BEXAR COUNTY — American Gas Co.'s Oliver 5, 400-ac tr, M. F. Rodriguez sur, Gas Ridge, td 2996 ft, set 6⅝-in csg 2250 ft, wocs. N. Anderson's Rudolph Vogt 2, 92-ac tr, Chas. Johnson sur, abnd 650 ft. Tom Anderson's C. J. Krause 1, sp & sd. Carter & Ingersoll's Louis Mann 1, 60-ac tr, John Christopher sur, 3 mi s Von Ormy, ur 8½ csg 670 ft. Crouch & Shadrock's W. Kohler 1, spud & ru. Joe Deupree's R. S. Coffey 1-A, F. Roderiquez sur, 7 mi s San Antonio, testing 1110 ft; Wm. H. Russell 1, 723-ac tr, Fernando Rodriguez sur, 9 mi ne San Antonio, td 1001 ft, set 6⅝-in csg 980 ft, clean out to complete. H. J. Moore's Mrs. Lena Eisenhauer 1, 80-ac tr in Gertrude Rodriguez sur, 9 mi ne of San Antonio, sd 350 ft. O. M. Owensby's Minna Coreth 1, 284.04 ac tr, Adam Stafford sur No. 49, near Eckert field, dr 950 ft. H. A. Pagenkopf's Chas. Rittiman 1, 100-ac tr, J. Chappal sur, 12 mi ne San Antonio, near Kirby, sd 1312 ft, top Edwards lime 1110 ft. H. B. Starkey's (was Joseph H. Parker) M. McCloskey 1, F. A. Desaque sur, 5 mi nw Somerset, sd 803 ft. F. M. Shaver's A. W. Bitter 1, J. M. Baerrera sur, near McDonna, sd 881 ft; A. W. Bitter 2, J. M. Baerrera sur, partly ru & sd. H. B. Schumacher's Hilda Gilette 1, 465 ft fr W. W. White Road and 235 ft nl of 49-ac tr in M. G. de Alamiz sur no. 20, and 7 mi south of San Antonio, lcn.

BLANCO COUNTY—R. T. Rowe & W. E. Nixon's Polk Morrisey 3, 222-ac tr, Thomas Webb sur No. 91, 3 mi e of Blanco, dr 125 ft.

BROOKS COUNTY—The California Co.'s B. Garcia 1, tr No. 3, Las Mestina de Gonzalina gr, Alta Mesa dist, coring 3115 ft. Dick Young et al's Singer 1, ne se sec 312, cored sand 632-35 ft, making dst.

BURLESON COUNTY — Walter Blumenthal's G. V. Crain 1, W. C. Pearce sur, ab 297, 1 mi fr Milam County line, coring 3262 ft.

CALDWELL COUNTY—Pat Armstrong et al's No. 1 N. Dunlap Est., 431-ac farm in S. Seal sur, sd 21 ft. Detroit-Texas Dev. Co.'s W. P. Dunlap 3-A, S. F. Sanders sur, Dunlap area, td 2589, shot 50 quarts, oil show 2317-26, set 4-in csg at 2073 ft, co. J. J. Elam et al's Francis-Brown-Cochran 1, W. F. Young sur, 5 mi e of Luling, sd 27 ft, for orders. Exploration Dev. Co.'s (Fred Meyer) W. R. Eibaud 1, 57-ac tr, S. Seal sur, Dunlap area, dk. Joe Graham's Martindale 1, e of Staples, dr 425 ft. W. C. Jenning's McMahon 1, James Pinchback sur, se of Lockhart, sd 150 ft. Marts & Beavan's J. J. Jolley 1, E. Pettus sur, midway between Lockhart & Lytton Springs, dr 1510 ft. McNeil Pet. Corp.'s C. A. Lackey 1, 1½ mi sw Dale, sp. Fred G. Scott's E. P. Dunavent 1, 4 mi se San Marcos, sd 135 ft. Sterling & Wilson's M. L. Strawn 1, Pablo Martinez sur, at Lytton Springs Townsite, mir. M. R. Tinkle et a"s Arnold 1, S. Seal sur, Dunlap area, lcn.

CALHOUN COUNTY — Continental's Am. Nat'l Realty Co. (Moody) 2-A (3), sec 6, blk C, P. Garcia sur, 9 mi se Seadrift, set 8⅝-in csg 8020 ft, prep to dr plugs. Plymouth and Humble's E. Welder 1, Gardner Smith sur, ½ mi w Heyser, N. Green Lake, old td 5225 ft, set whipstock at 2207 in pb hole, dr 5340 ft in sdtr hole.

CAMERON COUNTY — J. F. Anderson's Turfitt 1, blk 397, San Benito sub, Espirtu Santos gr, 3 mi ne Rio Hondo, sd 5194 ft. W. R. Daniels and King-Woods Oil Co.'s Port Isabel Co. 1, center lot 17, shares 29, 30 and 31, Buena Vista gr, 6 mi n Bayview, sp & sd, wor.

DEWITT COUNTY — Hill Brothers & Koontze's Riddle 1, 450 ft sl (river), 330 ft wl of 535.5-ac tr, J. Santos sur (6 mi se of Yorktown), ru. Universal and Glaspie's Schubel 1, C. Fitzgerald sur, abt 2 mi nw Yoakum, sd 425 ft.

DUVAL COUNTY—J. H. Chandler's Rita S. de Pena, Pena tr, sh 4, Mesquite gr, sand 2808-24 ft, sandy shale 2824-32, oil odor, sd for orders 2832 ft. Continental's Sevier 7-A, sec 52, Santa Rosalia gr, reaming 3200 ft. Charles Daubert et al's D. F. Kreis 1, sec 518, 6 mi e Loma Novia, prep sd 1010 ft for water. Frank J. Gravis et al's Gravis et al 1, sec 250, 9 mi w San Diego, dr 3120 ft. Howard Pet. Corp.'s G. Ruiz 1, sec 5, e of Loma Novia, 4000 ft test, lcn. Humble's Wright 1, se sec 118, 1 mi n of Seven Sisters field, lcn. Intrepid Oil Co.'s Parr Ranch 1, sec 26, 7 mi nw San Diego, sd 4856 ft. Magnolia's J. M. Bennett 1, sec 434, 5 mi ne Cole field, coring 2856 ft, sw sand 2851-56 ft. Marzo Oil Co.'s E. R. Hagist 2, sec 269, dr 2050 ft. W. C. McBride, Inc.'s Hagist 1, blk 13, sec 267, sd 1375 ft. Rogers & Rogers' Cuellar 1, sec 117, Hoffman area, td 2855 ft, set 7-in csg 2852, Loma Novia sand 2854-71 ft, wocs. Santa Clara Oil Prod. Co.'s Welder Hrs. 1-A, nw sec A out of sur 103, 6 mi e and 1 mi n of Freer, cored Loma Novia sand 2914-21 ft, set 7-in csg 2911 ft, dr out plugs; Book Ranch 1 (O. G. Glasscock), 9085 ft sl, 3945 ft el of Book Ranch in Santa Cruz de Concepcion gr, in extreme southeast portion of county on 9629-ac tr, spudded, 6000-ft test. Sun and Simms' Worden & Drought 3, 1660 ft nl, 2160 ft el of sur 151, dk and laying water line. Westheimer & Daube's Z. Compos 3, sec 224, east outpost Seven Sisters field, cored sand 2221-30 ft, making dst.

EDWARDS COUNTY—Paul Teas' J. B. Stewart 1, sec 2, GC&SF sur, 14 mi se Rock Springs, bldg dk 1026 ft, ru rotary to dd.

FRIO COUNTY—Amerada's Cory & McWilliams 1, blk 13, Jose Arocha sur No. 298, 2¼ mi sw Smith 1, dr 4250 ft, Navarro sand

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4082-95 ft, show sw; Halff & Oppenheimer 5, S. Glenn Survey No. 335, Pearsall area, set 10-in at 223, dr; Halff & Oppenheimer 6, San Antonio Ditch Co. sur No. 1104, Pearsall area, set 37 ft 20-in csg. W. D. Bacon et al's Burns 1, Thomas B. Clifton sur, sd 3008 ft. Thornton Davis et al's Halff & Oppenheimer 1, J. D. Clare sur No. 336, 1 mi w of Pearsall field, dr 3200 ft.

GOLIAD COUNTY—Jane Oil Co.'s (Diamond Half Oil Co.) Gillett 1, J. Gomez sur, 1 mi e North Pettus field, complete sand 3694-3704 ft, flowed 15 bph, 3/16 ch, tp 100 lbs, cp 375 lbs. H. J. Porter et al's J. R. Kaufman 1, 40-ac lse, A. Trevino sur, 1000 ft e of Kaufman 1-C, Hords Creek, lcn. Port Isabel O&G's Dauderstadt 1, 330 ft nl & el of tr in Solomon Hall sur in e end of county, lcn, 5500-ft test. Thompson Drlg. Co.'s J. E. Pettus 1, 750 ft fr creek, 2750 ft sl of tr in Maria de Jesus y Bravo gr, 1100 ft se Stanolind 1, 12 mi nw Goliad, sp & sd. H. Taylor Est. 1, W. H. Smith sur, 6 mi n Goliad, sd 5301 ft. Zeni Oil Co.'s (was H. T. Potter et al) Lutenbacher 1, blk 25, Goliad Townsite sur, s of Goliad, spd.

GONZALES COUNTY—O. M. Owensby et al's (was Forrester Oil Co.) H. B. Steen 1, N. M. Bane sur, coring 1800 ft. Tull et al's J. F. Bozka 1, 61.2-ac tr, B. McClure sur, s of Dilworth, sd 410 ft.

GUADALUPE COUNTY—Paul Armstrong's Clem Brodnaux 1, 36-ac tr, W. P. King sur, 2 mi ne Kingsbury, dr 1500 ft, shale. Clark & Gay's Waldrip 1, center 1½-ac tr in Staples townsite, G. Allen sur, sp. Eickenroht & Gallagher's O. H. Jahns 1, 840-ac tr, Green Dewitt sur, 3 mi sw South Darst Creek, Edwards lime test, ru. O. W. Killam's J. Reneker 1, in G. Chatwell sur, 3 mi sw Staples, coring 1175 ft, top Georgetown 1139 ft. A. C. Locke's H. Holmes 1, 26-ac tr, Cyrus Campbell sur, 2 mi n & w of Staples, dr 530 ft. R. C. Robbins' Manford 1, James Hodges sur No. 374, 1250 ft e Manford pool, ru to pump 2581 ft. Fred G. Scott's F. P. Pooley (Walter Schultz) 1, 2 mi s Staples, dr 195 ft. H. P. Suggs & L. R. Reedy's J. H. Sherrill 1, 460 ft nel, 1345 ft nwl of 100-ac lse, Geo. Allen sur (1¼ mi s of Staples), dr 58 ft. W. J. Walton et al's Anton Zoboroski 3, 1150 ft s & 850 ft w fr ne corner of 227-ac tr in Joseph D. Clements sur, ru.

HIDALGO COUNTY — Dean Brothers' George 1, tr 13, por 41, Reynosa Juris, 7000 ft e of discovery, 700 ft n of Samfordyce production, lcn. Gulf States Oil Co.'s Delta Orchards 1, lot 2, blk 73, Las Mestinas gr, 1 mi s Mestinas field disc well, sd 1675 ft; J. C. Engleman 3, lot 3, blk 70, Las Mestinas gr, 700 ft e of Mestinas field disc well, lcn. Kingwoods Oil Co.'s Osca Daskam 2, blk 30, por 45, 10 mi ne Mission, dk. Maddox & Tatum's Shary 1, tr 48-2, por 53, Reynosa Juris (abt 7 mi n & 1 mi w of Mission), 6000-ft test, sp & sd. Maxwell-Mundy-Morris' Southland Dev. Co. (Hidalgo County Water Control & Impr. Dist.) 1, lot 11, blk 20, Alamo Land & Sugar Co. subd., Alamo gr, 4 mi s Alamo, sd 735 ft. Quintana Pet. Corp.'s John C. Engelman 1, 466 ft sl & wl of e½ of lot 10, blk 94, Mestinas gr, 4 mi se of Gulf States' Engelman 1, mim. Dayle L. Smith Oil Co.'s Fairbanks & Young 1, blk 44, por 46, Reynosa Juris, 4 mi e Samfordyce field, dr 1550 ft. Union Sulphur Co.'s ARGL&I 7, tr No. 2309, blk 59, about 4000 ft e of Mercedes field, dr 4040; No. 8 ARGL Co., 660 ft nl & el of tr 2120, blk 87, N. Capisallo district, mim.

JIM HOGG COUNTY—French Oil Corp.'s E. Rodriguez 1, sh m-1, Partition of Las Cuevitas gr, coring 2472 ft. S. L. Miller Oil Co.'s Yeager 1, blk 6, sur 20, td 3559 ft, cored dry sand 3523-35 ft in sdtr hole. P. H. Neilson, trustee's de la Garza 1, blk 293, Pippin sub, Randado gr, sd 610 ft. G. C. Rankin's Vela 1, blk 6, sec 5, dr 1865 ft.

JIM WELLS COUNTY—Houston Oil Co. et al's E. A. Hawkins et al 2, blk 11, Putnam sub, sh 3, San Diego gr, ½ mi n disc well, San Diego field, dr 3650 ft. O. W. Killam's George Reynolds 1, sur 28, 4 mi w of Orange Grove, dk. G. M. Richardson's J. E. Garrett 1, sec 5, N. G. Collins gr, 15 mi n of Alice, near Highway 66, ru. J. E. Walsh's W. D. Wade 1, lot 3, blk 6, W. H. Bode sub, Sandia district, sd 2920 ft.

KARNES COUNTY—California Co. & Mills Bennett's J. R. MacDougal 1, 250 ft nel, 190 ft sel of Wm. Guthrie sur, 3 mi e Runge, coring 3077 ft.

KERR COUNTY—Auld & Evan's Heffner 1, sec 13, BS&F sur, dr 1325 ft. Eastland Oil Co.'s Jeff Love 7, 660 ft n & 150 ft e Gant Evans 1, J. Martinez sur, sec 1594, 640-ac tr, 6000-ft test, set sur csg, wocs. Evans & Edmiston's Will Auld 1, 418-ac tr, sec 1592, 2500 ft sw Eastland's Love 1, sp.

KIMBLE COUNTY — Forest Dev. Co.'s Stapp 1, sec 682, sd 4020 ft, may abnd, in granite wash.

KLEBERG COUNTY—Clark & Anderson's J. W. Kellam 1, 330 ft sl & el of lot 7, sec 53, KT&I sub, 2 mi se Kingsville field, dk.

LAVACA COUNTY—J. D. Aiguier et al's A. A. Staffa 1, W. R. Henesy sur, 3 mi s of nl of county, sp.

LIVE OAK COUNTY—R. H. Feltner et al's John T. Carter & Bros. 1, 1847.5 ft nwl of sur & 330 ft nel of ne 120-ac of w 160-ac of sec 319, T&T Ry. Co. sur, in extreme sw portion of county, near Sanger Ranch test, mim. Houston Oil Co.'s Cartwright 33, 1172 ft n No. 21, 808 ft e of the RR 880-ac tr, Francis Botello sur, ru. Luray Oil Co.'s Little 1, M. M. Shipp sur, ne offset disc well in McNeill (North) field, td 5302 ft, pb 5025 ft, perf above, still testing. Ogden & Reed's D. C. Reed 1, Clegg Ranch, sw part of county, ru. Santa Clara Oil Co.'s R. H. Corbett 1, Corbett sur (center of sur), fsh for core barrel 3200 ft. L. W. Stieren's W. A. Smith 1, T. R. Reese sur, 6 mi ne Oakville, sp.

MAVERICK COUNTY—Fulwood & Marr's State Bank & Trust Co. 1, GC&SF sur No. 3, 2 mi n of Eagle Pass, sd 770 ft. Thompson & Streeter's Joseph Wipff 1, sec 18, 7 mi w Chittim field, 10 mi n Eagle Pass, sd 220 ft.

McMULLEN COUNTY—F. Daybault's Matula 1, 100-ac, James Garner sur, 2½ mi sw Calliham, dr 753 ft. Chas. A. Hall et al's Lucy Claunch 1, 200-ac tr in M. Hely sur, ½ mi s Calliham field, td 1344 ft, set 5 3/16-in csg to 1000 ft, perf 925-39, bailed salt water, abnd; Claunch 2, 200-ac tr, M. Hely sur, ½ mi s Calliham, 400 ft se No. 1, skid on. Loma Oil Co.'s Jacob 1-F, in John Fadden sur, 330 ft due west of Texas Inland O&G Co.'s Lark 1-B, lcn. Luray Oil Co.'s Glass 8, Gardner sur, Calliham area, dr 500 ft. Magnolia's Kincaid 1, 2310 ft wl, 330 ft nl sec 86, 3 mi e of Texio well, lcn. Stewart et al's Lowe 1, Geo. Bright sur No. 21, 2½ mi sw Tilden, sd 2250 ft. Stella Tiechman's J. J. Henry 1, 575-ac tr, A. Torres sur No. 21, ab 457, 7 mi w Tilden, sd 370 ft. Ike W. Taylor's Lark 1, blk 56, Lark subd, E. W. B. Scrugham sur, between Calliham and Jacob field, sand 966-77 ft, running tubing to comp. Whisenant & Trenchard's Roos Brothers 1, center of se se sec 93, ru. Witherspoon Oil Co.'s Calliham Estate 1, 330 ft sl, 160 ft wl, blk 11, M. Hely sur, lcn.

MEDINA COUNTY—Frank A. Brown's A. E. Brueks 1, John Ward sur, sd 700 ft; Mary R. Winn 1, John Ward sur, td 60 ft, set sur csg & sd. W. C. Campbell et al's (Ed Falvey et al) McMenemy 1, sur No. 331, G. Petty sur, 4 mi se Devine, fsh 2810 ft. Letro Oil Corp.'s F. B. Forest 1, sec 69, 1½ mi ne Ina field, 1½ mi Adams field, pull pipe to abnd, 1020 ft.

MILAM COUNTY—R. G. Conan's H. & L. Hudson 1, 160 ft wl & 750 ft nl of 100-ac tr, S. C. Robinson sur, lcn. Minerva Ref. Co.'s Shelton Est. 4, 50-ac tr, Wm. Allen gr, Minerva-Rockdale area, completed.

NUECES COUNTY—D. H. Hawn's Wm. Shely 1, center of 9-ac tr, about 3500 ft ne Saxet Heights field, Villareal sur, ru. Refugio Refining Co.'s Jonas Weil 1, 80-ac tr, Villareal sur, 1 mi se Saxet Heights, dr 2650 ft. Santa Clara Oil Co.'s C. H. Cooke 1, 330 ft nl & wl of sec 14, Guadrilla Irrigation co. sur, 4 mi e Driscoll, mim. Thompson & McGrew's A. F. Geistman 1, 120-ac tr, J. R. Ward sur 316, lcn.

REFUGIO COUNTY — Texas Gulf Prod. Co.'s Carl Arnold 1, sec 33, Bonnie View subd, Wood Ranch, 9 mi se Woodsboro, dr 5208 ft. United Prod. Co.'s W. J. Fox 16, 182-ac tr, Hews & Brown sur, Fox area, td 5891 ft, set 7-in csg at 5885 ft, perf csg 5879 ft, comp 5 bph, 3/16 ch; M. F. Lambert 22, blk 22, C. A. Hardwick sur, elev 65 d.f., cored sw sand 5602-38, sd; M. F. Lambert 23, tr 21, C. A. Hardwick sur, lcn.

SAN PATRICIO COUNTY—Argo Royalty Co. and Willis Storm's Hobbs 1-A, 215 ft nw No. 1, Delgado gr, 1 mi s Mathis, digging pits. Humble's J. W. Goodwin 1, 364 ft sl, 330 ft wl of lot 1, sec 23, third addition, Taft Farm Lands, dr 3900 in shale and lime. Geo. E. Smith et al's J. L. Britton 2, 660 ft due e No. 1, blk 8, sec 5, third addition Taft Farm Lands, sd 4932 ft. L. L. Smith's W. G. Thomas 1, lot 5, sec 6, third add., Taft Farm Lands, ¾ mi e discovery well Taft field, lcn temp abnd. Hiriam Reed et al's R. Svedlenak 1, 330 ft nl & wl of lot 1, sec 5, first add., Taft Farm Lands, 1½ mi s Taft discovery, mim. Stanolind's Alamo Iron Works 1, lot 17, Patrick Fitzsimmons sur, 3 mi sw Sinton, dr 6020 ft; Floerke 1, lot 5, blk 17, 1st addition, Taft Farm Lands, 4 mi s & e Taft field, dk. Texon Drlg. Co.'s R. L. Rambo 1, 330 ft wl, 466 ft nl, lot 6, sec 35, 4th add., Taft Farm Lands, ½ mi e of s end of Plymouth field, bldg dk.

STARR COUNTY—Ash & Tackett's R. E. Margo 1, blk 4, sh 3-B, por 70, Juris of Mier, td 378, prep run tubing & test sand 372-76 ft. O. G. Borah et al's V. C. de Guerra 1-A, sh 92, por 68, 2 mi n of Roma, set 8⅛-in sur csg at 202 ft. John H. Clopton's Kelsey Bass 1, center sec 357, 8 mi s of Cuevitas, dr 1610 ft; Roos & Bennett et al 3, blk 6, Clopton sub, por 92, 1 mi North Rio Grande, 6 mi w Samfordyce, td 4003, set 5-in csg 2650 ft, perf 2415-17 ft, comp 20,000,000 cu ft gas. Coreta Pet. Co.'s J. H. Burnett (Haden et al) 1, sh 47, por 80, dr 900 ft. Griffin & Kimbrough's Guerra 1, sh 298, por 69, n of Mier, lcn. Harter & Maynew's Sanchez 3, 739 ft nl, 1112 ft wl, sh 69, por 72, n Roma, sd 512 ft. Marc Jenkins' Wm. Martin 1, sec 627, 13⅛ mi ne of Rio Grande City, dr 775 ft. Sun's M. Guerra & Sons 10-A, Las Cuevitas gr, Cuevitas district, td 2271, sand 2259-76, comp 10 bph, ¼ ch. A. F. Vannoy et al's (Marc Jenkins et al) H. Garza Jr. 1, blk 10, sh 26, por 70, nw of Roma, sd 887 ft. A. J. Weyel's Wardner 1, 321 ft s, 244 ft el of 160-ac tr, por 84, td 2040, blew out making gas, salt water, running wild. Otto W. Woods' H. P. Guerra 1, lot 35, Conroe subd, por 55, Mier Juris, lcn.

TRAVIS COUNTY—Albrecht & Brinkrueger, Sr.'s M. C. Swenson 1, 75-ac tr, L. Kimbro League, sec 5, drlg. Richey's Lungren 1, 330-ac tr in Kimbro sur, in blk 14, sd 410 ft.

VICTORIA COUNTY—Barnsdall & Felmont's Pickering and Roos 1, 330 ft nel & sel of lot 3, S.A.&M.G. sur, ab 306, td 5950 ft, flowed 175 bpd 3/16 ch, tp 460 lbs. cp 1400 lbs. Gillespie & Superior's Henderson & Pickering 1-B, blk 93, SA&MG Ry. sur, ab 308, 1 mi w of production, ru. S. A. Guiberson & Chas. Pettit's Oscar Wedemier 1, 406.82-ac tr, Jose Carabajal sur, 4 mi nw of Victoria, dr 1550 ft. Rowan & Hope's A. W. Scheel 1, 330 ft swl & nwl of Scheel 195-ac tr in J. N. Esalera gr, lcn. S. C. Yingling's Jacob Stahle 1, 15-ac tr, P. Gallardo sur, ab 32, 1 mi sw of Coleto Creek field, set 650 ft of sur csg.

WEBB COUNTY—Foster Barnsley's C. H. Webster 5, 150 ft el, 510 ft nl, ne¼ of sw¼ of sur 684, td 3000 ft, milling out at 2400 ft, td 3000 ft. Mills Bennett's de Perez, 330 ft sl & el of s 1/3 of w½ of sur 709, drlg 1870 ft. D. E. C. Oil Co.'s Slator Ranch 1, blk 29, Mission Oil Co. subd, Slator Ranch, J. S. Borrego gr, sd 2624 ft. O. W. Killam's Ortiz Ranch 1-A, 50 ft n No. 1, por 17, 6 mi nw Laredo, dr 2250 ft; Ortiz Ranch 2, sec 1805, 14 mi ne Laredo, dry & abnd 3625 ft. Payne & Martinez's Mrs. M. P. Perry 1, sur 771, lcn. Holland S. Reavis' C. H. Webster 1, nw ne sec 684, 1 mi e Carolina-Texas field, dr 3975 ft. S. S. & B. Oil Co.'s Lone Star Construction Co. 9 (now Lutex Oil Co.), por 12, ½ mi nw of Laredo, dr 1245 ft. Superior Oil Co.'s A. S. Billings 1, sec 7, 1 mi w Lopez field, coring 2390 ft. W. H. Vernor tr's Jefferies Ranch 1, blk 13, sec 1453, 30 mi nw Laredo, dr 750 ft. A. H. Wray's Geo. Steumpke 1, sh 1, Brewster Pasture, Joaquin Galan gr, sd 1678 ft.

WILLIAMSON COUNTY—Glass Bros.' A. Albert 1, P. Coursey sur, sd 785 ft. H. F. Goff's Chas. Patschke 1, 110-ac tr in Foley sur, sd 255 ft. G. A. Ripley 1-A, A. Muery (2nd hole), sd 1010 ft, shale.

WILSON COUNTY—Comet Oil Co.'s Jim McDaniel 1, 343-ac tr in Conception Botello sur, 4 mi Poth, sp & sd. A. G. Riemenschneider's Lon Harrell 1, 209-ac tr in Manuel Baerrera sur, 5 mi s of Floresville, fsh 567 ft.

ZAPATA COUNTY — Murt Cullinan's E. Gutierrez 1, blk 4, sh 2, Fansler Partition Comitas gr, 2 mi Escobas field, dr 1600 ft. J. W. Magee's Bruni 1, blk 45, Blas Uriba Tr, J. V. Borrego gr, sd 2015 ft. J. J. O'Hern et al's S. Neal 1, blk 3, por 27, 7 mi ne of Charco Redondo field, dr 2210 ft.

ZAVALLA COUNTY—W. L. Bridges' E. B. Flowers 1, 1320 ft nl & wl sec 19, blk 1, I&GN RR sur, lcn. Frank Buttram et al's Whitecotton 1, B&M sur No. 1, dk. Leona Oil Corp. & Witherspoon Oil Co.'s Geo. West 1, C. Bustillo sur No. 1, lcn.

EAST TEXAS

ANDERSON COUNTY—Burks Bros. et al's S. G. Moore 1 (36.3-ac) J. C. Rosson sur, Camp Hill area, lcn. Sun's Carl Rosson 1 (110-ac), W. T. Davis sur, Camp Hill area, elev 567 ft, Pecan chalk 3877-4219 ft, base Austin chalk 5043 ft, top Sub-Clarksville sand 5058 ft, tested good oil flow at 5073 ft, sd for tanks; Carl Rosson 2, dk. Tide Water & Seaboard Oil Corp's M. J. Reagan 1 (214.8-ac), John Adams sur, Long Lake area, dr 1370 ft. Shaw & Cern 4 (1216-ac), Daniel Parker sur, Long Lake area, oil sand 5338-47 ft, testing; Shaw & Cern 5, dk.

CASS COUNTY — American Liberty Oil Co.'s J. B. Rodgers 1 (167.95-ac), C. M. Robinson sur, Rodessa area, elev 238 ft, top Hill sand 5737 ft, showed sw in regular pay, coring 6710 ft. R. W. Norton, Tr.'s Mary Rives 1 (85-ac), John Collum sur, w Rodessa field, elev 277 ft, chalk 1895-2485 ft, top Red Beds 3394 ft, top anhydrite 5043 ft, dr 5300 ft. T. H. McElvain et al's C. M. Beckett 1 (7.62-ac), John Collum sur, w Rodessa field, lcn. United Prod. Corp.'s J. R. Jones 1, Ben J. Murray sur, Rodessa area, mim.

COLLIN COUNTY—Port Bolivar Oil & Ref. Co.'s Clarkston-O. G. Durning 1-A (140-ac), Wm. Creager sur, Pat. No. 1193, elev 722 ft, sd 3866 ft; J. Shirley 1-A, James Sorrell sur., Pat. No. 3609, (first hole junked at 1963 ft), sd for rig.

DELTA COUNTY—Delta O&G Co.'s J. H.

McKinney 1 (59-ac), Lavina Hampton sur, 3 mi nw Cooper, elev 530 ft, top Blossom sand 1108 ft, dr shale 2760 ft.

FREESTONE COUNTY—J. P. Haley & C. F. W. Young's Jack Eppes 1 (18-ac), David Bullock sur, 8¼ mi se Teague, elev 471 ft, top Pecan chalk 2965 ft, Austin chalk 3761-4143 ft, co 4146 ft.

GREGG COUNTY—G. Killingsworth et al's fee 1 (50-ac), Henry Hathaway sur, 9 mi n Longview, Pecan chalk 2315-2911 ft, Austin chalk 3504-48 ft, dry Woodbine sand 3558-61 ft, Georgetown lime 3564-3643 ft, dry and abd.

GRAYSON COUNTY—Olson Drlg. Co. et al's SW Life Insurance Co. 1 (160-ac), J. C. Jamison sur, A-865, 3 mi n Pottsboro, elev 767 ft, Trinity series from surface to 850 ft, Springer shale 850-1240 ft, Mississippian Caney shale 1240-4308 ft, fine grained sand 4308-4482 ft (with odor o&g 4441-82 ft), chert 4482-4637 ft, top Woodford shale 4637 ft, lost dp 4670 ft, pb to 3535 ft to sidetrack. Port Bolivar Oil & Ref. Co.'s Creed Taylor 1 (160-ac), J. Fitzhugh sur, 3 mi se Gunter, sd 3931 ft.

HENDERSON COUNTY — C. & G. Oil Co.'s Sterrett 1, Isham Marshall sur, dry and abd in shale 1800 ft. L. V. Marmar et al's I. W. Brown 1 (183¼-ac), R. H. Pearson sur, nw Cayuga, dk. Sparks et al's Theo. E. Berry 1 (167.8-ac), Aaron York sur No. 847, 5 mi s Brownsboro, lcn.

KAUFMAN COUNTY—C. C. Pearson et al's G. W. Martin 1 (100-ac), W. F. C. Butler sur, elev 429 ft, Austin chalk 1940-2200 ft, sd 2402 ft.

LAMAR COUNTY — Bruce Bros. et al's Chas. Price 1, Wm. Nelson sur, 1 mi w Trout, elev 484 ft, sd 326 ft.

LIMESTONE COUNTY—David J. Crawford et al's Mrs. R. P. Ward 1 (28-ac), Pedro Varella sur, elev 509 ft, small oil pumper, td 3001 ft; Ward 2, elev 508 ft, top Woodbine sand pay 2985 ft, td 2997 ft, pb to 2991 ft to test. C. F. Lytle et al's J. L. Thompson 1-T (141-ac), Pedro Varella sur, w Mexia field, Trinity test, rig. Money Oil Co.'s Bill Rosson 1, blk 4, Pedro Varella sur, old Nigger Creek area, rig.

MORRIS COUNTY—Ray Cotuck, Inc.'s P. M. Staggers 3 (40-ac), J. D. Nelson sur, dk. Steve J. Rotundi et al's W. & C. Smith 1 (50-ac), M. C. Vela sur, 2½ mi sw Naples, top Navarro chalk 2258 ft, dr shale 3065 ft.

NAVARRO COUNTY—E. M. Thomason & Co.'s Estes Bros. 1 (58-ac), blk 11, Wm. Gilbert sur, 1 mi e Roane, sd 1255 ft. Peyton Bros.' J. F. Rushing 1 (12½-ac), Henry Ford sur, 3 mi w Currie, top soft Austin chalk 2112 ft, hard chalk 2131-2515 ft, top Woodbine sand 2821 ft, base sand 2915 ft, tested sw, dr 3030 ft.

RAINS COUNTY—W. A. Allen, Geo. W. McClung et al's Ida Bullard 1 (75-ac), Nancy Brantley sur, 2 mi sw Emory, sp and sd.

RED RIVER COUNTY—J. S. Abercrombie Co. & Harrison Oil Co.'s T. L. Knight 1 (231-ac), Robt. Hill sur, 13 mi n Clarksville, rig. Annona O&G Co.'s Leo & Otto Roberts 1 (200-ac), James Bankston sur, 2 mi ne Annona, sd 160 ft. Garson & Seigel's W. T. Morris 1 (351-ac), Joseph Guest sur, 1 mi s Detroit, elev 478 ft, sd 825 ft.

RUSK COUNTY—McCallum et al's E. C. Gary 1 (265-ac), John Pilburn sur, 5 mi s Henderson, dk. J. W. Shipman et al's Citizen's Nat'l Bank (L. T. Burton) 1-A (125-ac), J. J. Y'Barbo sur, 4 mi ne Henderson, elev 432 ft, sd 3925 ft.

SMITH COUNTY — W. L. Cloud et al's Dora Kendall 1-A, John Williams sur, 3 mi e Van field, sd 180 ft. Frank D. Staples et al's Luther Hale 1 (115-ac), T. C. Williams sur, 3½ mi nw Arp, elev 504 ft, sp and sd. Winona Oil Corp.'s McClung 1 (23½-ac), E. Newberry sur, 1 mi e Winona, dr 110 ft. Sanders et al's McClung 1 (471-ac), Samuel Epps sur, ½ mi n Friendship, lcn.

TITUS COUNTY—C. N. Housh, Thompson & Bob Peveto's C. M. Carr 1 (108-ac), (north) M. V. Delgado sur, 1½ mi e Talco, elev 370 ft, Pecan chalk 1611-1788 ft, top soft Austin chalk 3011 ft, top hard chalk 3032 ft, top Woodbine sand series 3436 ft, top Georgetown lime 3780 ft, sd 3960 ft.

WOOD COUNTY—Gulf Prod. Co.'s C. D. McCollum (Stone) 1 (39.6-ac), Joseph Simkins sur, ¼ mi s Alba, elev 456 ft, Pecan chalk 2370-2612 ft, Austin chalk 3700-3928 ft, trace oil 3956-60 ft, top Woodbine sand 4381 ft, tested sw 4405 ft, to dd to Georgetown lime.

FRENCH WILDCATS

Office National des Combustibles Liquides, Paris, France, has been granted an exclusive permit to drill for oil and gas in the region of the communes of Tourbes, Alignan-du-Vent, Pezenas, Castelnau-de-Guers, Nezignan-l'Eveque, Valros, Montblanc and Aumes, province of l'Herault. This concession amounts to about 4865 acres.

Office National des Liquides Combustibles continues drilling on two wildcats on the concession granted it last April in Haute-Savoie, near Frangy. Locations of these tests were staked following geological work by Gignoux and Moret. One of the tests is destined to go to 400 meters and the other to 150 meters, both relatively shallow undertakings.

Plans were under way early in January, according to word received by THE OIL WEEKLY, to start another Office National des Liquides Combustibles wildcat on a concession recently granted the company in l'Herault.

Rotary Machine

The National Supply Company, Toledo, Ohio, has ready for distribution Bulletin No. 89, describing the company's "CMB-24" Universal Rotary Machine, "Make-and-Break" type.

Paint

The Sherwin-Williams Company, Cleveland, has issued an attractive booklet that was prepared in cooperation with the Better Vision Institute and the Better Light-Better Sight Council. The bulletin gives an analysis of plant conditioning as it affects the lighting scheme, and shows the manner in which correct paints will increase lighting efficiency.

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NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Catalogs • Books

AIR COMPRESSOR
Allis-Chalmers Manufacturing Co.

Allis-Chalmers Manufacturing Company, Milwaukee, has announced a new line of two-stage, sliding vane rotary air compressors for pressures up to 100 pounds G. The manufacturer claims that the design is entirely unique, in that both stages as well as the inter-cooler are contained in a single casing. The new type, known as "Ro-Twin", offers the advantage of reduced floor space, lighter weight, one stuffing box, no external air piping between stages, two bearings, one flexible coupling, and easy alignment.

NARROW TRAVELING BLOCK
Regan Forge & Engineering Company

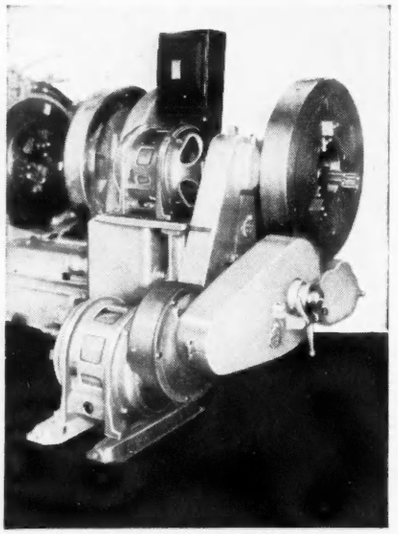
Regan Forge & Engineering Company, San Pedro, California, engineers have designed a narrow traveling block, Type G, equipped with five or six sheaves and for 500-ton capacity. The sheaves are 48 inches in diameter. The six-sheave block occupies only 24½ inches in width, which is the same size occupied by ordinary four-sheave blocks. The weight is 13,000 pounds.

Regan announces the Type G block as a result of the trend of deeper drilling, which means more pipe stacked in the derrick, and, consequently, a limited amount of clearance for the up and down path of a traveling block.

Regan Traveling Block

MOTOR BASE
Allis-Chalmers Manufacturing Co.

Allis-Chalmers Manufacturing Company, Milwaukee, is offering the "Straitline Automatic Ball Bearing Motor Base" for providing a convenient place from which to operate a suitable sheave and maintaining a uniform belt tension throughout the speed range adjustment. The company claims that the new base virtually "places the motor on wheels." Four ball bearings, totally enclosed and fully lubricated, support the motor and the upper half of the motor base. The travel of the base is always in a straight line and is anchored to its foundation. The dial indicator on the ball bearing motor base enables the operator to maintain the correct belt tension.



Landis "Bucking-Up" Machine

"BUCKING-UP" MACHINE
Landis Machine Company

Landis Machine Company, Waynesboro, Pennsylvania, has developed a dual speed arrangement for its Landis pipe threading and cutting machine with receding chaser die head for "bucking-up" tool joints. Two 1200 r.p.m. motors are employed, one providing spindle speeds through a gear box ranging from 8 to 28 r.p.m. for thread cutting, the second motor providing through a 260 r.p.m. gear box a speed of 2 r.p.m. for "bucking-up" tool joints. A friction clutch is used for driving the machine at threading speeds, whereas a tooth clutch is used to the slow speed work. When either motor and its clutch are in operation the other motor and clutch remain idle. A three-station push button control is employed. One station is used to start the threading motor, another station to start the slow-speed motor, and a third station is used to stop the machine. The switch is so wired that it is impossible to start both motors at the same time.

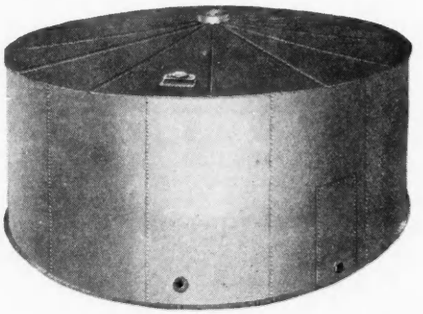
PIPE MACHINE
Beaver Pipe Tools, Inc.

Beaver Pipe Tools, Incorporated, Warren, Ohio, announces a new model A-Special pipe machine to cut, thread, ream and chamfer all sizes of pipe from ⅛-inch to two-inch, and operate geared tools to cut and thread 2½- to 12-inch pipe, and cut off solid bars having a diameter from ¼- to one inch, and to thread bolts and stayrods in sizes ranging from ¼ to two inches in diameter.

The Model A-Special is announced as a companion tool to the same organization's Model A-Standard. The manufacturer claims the following for it: it feeds manually, leaves practically no burr; wheels and rollers are standard and cheap; cuts steel, wrought iron, brass, copper, or cast iron.

GALVANIZED TANKS
The Maloney Tank Mfg. Company

The Maloney Tank Manufacturing Company, Tulsa, has announced that its bolted steel tanks of all standard A.P.I. sizes may now be ordered with a special heavy galvanized coating, for added resistance to corrosion. The new galvanized tanks, it is stated, are standard Maloney tanks of Keystone copper steel, hot-dip galvanized after fabrication. Galvanizing is being done at the new West Tulsa plant of the Rogers Galvanizing Company. Sheets and other parts are first given a prolonged bath in muriatic acid solution to prepare the surfaces for bonding tightly with the zinc coating. Virgin zinc 99.9 percent pure is then applied by the hot-dip process, the spelter weighing 5 pounds to 100 pounds of steel coated. It is stated that galvanizing after fabrication avoids injury to the galvanized coating, as well as galvanizing all edges of sheets including bolt holes. Finished coatings are said to be of highest standard, withstanding the severe Preece test of six one-minute dips in copper sulphate solution.



Maloney Tank

Special hot-dip galvanized bolts of 90,000 pounds tensile strength are used with these galvanized tanks.

SLUSH PUMP VALVE
U. S. Oil Tool Corporation

U. S. Oil Tool Corporation, Houston, is offering a slush pump valve that embodies several new features, the manufacturer claims. The valve is a full-hole type that provides a streamlined flow for fluids and is interchangeable for various makes of pumps.

One of the outstanding features of this valve is that it is constructed with no stem at either top or bottom. Moreover, the seat is made with no bridge or web and there are no legs in the bottom of the valve. These details provide for a greater opening through the valve and yet permit the same wall thickness and strength of the conventional type. The increased opening decreases the velocity of the fluid at any given pump speed; and this diminishes the erosive wear on the valve and seat, besides cutting down the head losses which cause unnecessary wear on pistons and liners.

The valve is a solid forging with the under side curved to give true stream-

line flow through it at all velocities. The upper side is made to take a specially designed cup-type rubber insert and holds this rigidly in place to assure perfect seating at all times. The valve and the seat are hardened by heat treating and with the valve ground to fit after hardening.

The valve guide is a cage screwed on to the seat after the valve is in place. It is made of steel with a stop at the top made at the proper height to allow the seat to open only the necessary distance for economical operation with slippage.

The new pump valve combines the best features of the flat-faced and beveled-face valves. The metal seating surface is beveled and the insert seats on a flat surface. The rubber insert makes contact with the seat on a large flat surface before the metal part of the valve contacts the seat. The insert is heavy enough to absorb practically all the shock and thus eliminates pounding out the metal seat. Inserts are also furnished of Du Prene for handling crude oils, etc. Further details can be secured from the company.

East Texas Directory

Wimberly Report Service, Kilgore, Texas, has published a revised edition of its East Texas field directory, giving name and address of each of the 1117 separate concerns and individuals operating producing properties in the field. Total number of leases and wells held by each are likewise included. The directory also lists active pipe line companies, refineries, gasoline plants, and various oil field equipment and supply companies.

Texas-New Mexico Map

Zingery Oil Map Company, Fort Worth, Texas, has issued a new map of Texas and Eastern New Mexico showing oil and gas fields and known salt domes. All fields are indexed to facilitate location.

Slush Pump

The National Supply Company, Toledo, Ohio, has issued bulletin No. 88 describing its Ideal power driven slush pumps, Type C-150.

This Week with the Industry's EQUIPMENT SUPPLIERS

Timken Steel Advances Williams to Sales Director

The Timken Steel & Tube Company announces the promotion of S. D. Williams to the position of director of sales, with headquarters in Canton, Ohio. Williams has been connected with the Timken organization since 1926, starting as metallurgical sales engineer, having been made manager of tube sales in 1935, after having served as assistant director of sales for several years.

Williams has been active in the development of special steels to meet the needs of the trade, his metallurgical training and wide practical experience and understanding of operating conditions enabling him to appreciate the problems of users of Timken seamless tubing and Timken alloy steels with a sympathetic understanding.

Robbins and Robbins Appointed Struthers-Wells Representatives

Robbins and Robbins, 504 Howard Avenue, New Orleans, have been appointed district representatives by Struthers-Wells Company, Warren, Pennsylvania, manufacturers and engineers of steel and alloy steel equipment. Robbins and Robbins will cover the states of Louisiana and Mississippi.

Pyrene Manufacturing Promotes Three Men

Pyrene Manufacturing Company, Newark, N. J., manufacturers of fire extinguishers and tire chains, has announced the appointment of George H. Boucher, formerly assistant general sales manager, to the position of general sales manager.

Charles G. Durfee, who has been manager, systems department, becomes assistant to the vice president in charge of sales.

J. P. Maloney, formerly assistant general sales manager, has been named general field sales manager.

Lee C. Moore Opens Corpus Christi Store

Lee C. Moore & Company, Inc., has opened a store at Corpus Christi, Texas, with J. R. (Bob) Roberts, formerly located at Tyler, Texas, in charge.

Hart Is Appointed Distributor for Murex

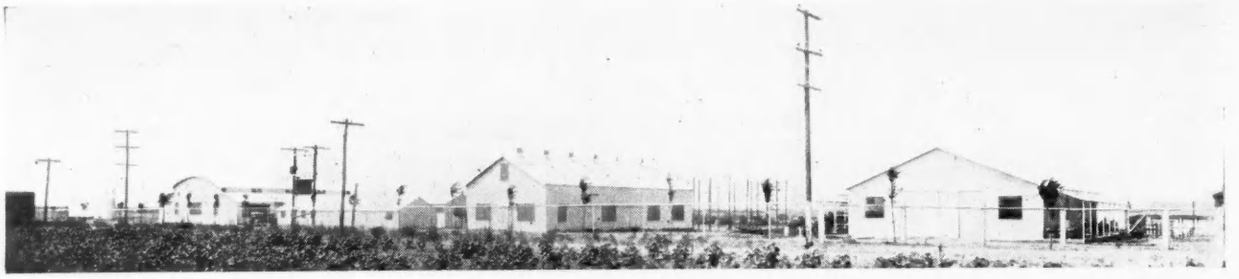
Hart Welding Supply Company, 411 West California Avenue, Oklahoma City, and branches in Borger, Houston and Pampa, Texas, and Rodessa, recently has been appointed distributor for Murex welding electrodes in Oklahoma, Texas, Western Louisiana and South-Central Kansas.

Edwin W. "Eddie" Goeser Passes On

The petroleum industry lost one of its best known members in the passing January 21 of Edwin W. Goeser, vice-president and production manager of Emsco Derrick & Equipment Company at his home in Los Angeles. He had been in ill health for approximately a year.

Mr. Goeser was 53 years of age and had been an executive of the Emsco industries since 1923. He was born in Cincinnati, Ohio, a graduate of Cincinnati Technical College, and moved to Los Angeles in 1905. He leaves his widow, Mrs. Florence M. Goeser; a daughter, Janet; his mother, Mrs.

New Houston service headquarters of Cavins Bailer Service of Texas, organized three years ago by Tom Sharp, general manager. Location of the recently completed plant is on the Beaumont road. The men, left to right in the picture are: Baker Shannon, South Texas district manager; Tom Sharp, general manager; K. B. Knox, Gulf Coast representative; J. B. Tucker, service manager; and John Pen Gelly, shop service manager. In addition to these men, the Cavins Bailer Service of Texas has the following district managers: H. L. Waters, Kilgore, covering East Texas fields; Elmer Glover, Odessa, in charge of West Texas and New Mexico, fields, and M. A. Widmayer, El Dorado, Arkansas.



Plant of Louis Sykes, Inc., Duncan, Oklahoma

Emillie Goeser; and a sister, Miss Estella F. Goeser.

Mr. Goeser's connection with the oil industry dates back to 1905 when he resigned his position as chief engineer for the R. K. Le Blond Machine Tool Company of Cincinnati to become chief engineer of Union Tool Company, of Torrance, California. Later, when the ownership of the latter company was transferred to National Supply Company of Toledo, Ohio, he was made chief engineer of all the manufacturing plants owned by that company, and was elected to the directorate of Union Tool Company.

He severed his connections with the above companies in 1923 to become associated with E. M. Smith, being made executive vice-president of Emsco Tool Company. When in 1926 that company was merged with Emsco Steel Products Company to form the Emsco Derrick & Equipment Company, Mr. Goeser was made second vice-president and manager of production, which office he has filled since.

Houston Show Expected to Be Filled Completely

Houston.—E. G. Lenzner, president and general manager of the Oil Equipment and Engineering Exposition, advises that all exhibiting space will be filled completely during the show in Houston, April 20 to 25. Due to the better condition of the industry, these exhibits will, moreover, be more complete in details and in attractive displays than at any previous show. Outside is available for demonstration work as well as for showing equipment too large for inside display.

The management is providing for reduced fares for visitors and for reduced freight rates for exhibitors. Considerable attention is being paid to foreign visitors and individual letters of invitation have been sent to officials of oil companies all over the world. A big percentage of oil equipment used in other countries is of American manufacture and representatives from all oil producing countries rely on the Exposition to learn about the latest designs in tools and machinery.

Among the special features which will be provided in addition to the exhibition of equipment, many will especially emphasize the application of scientific and engineering principles for greater efficiency in oil operations. Considerable attention will also be given to safety in all branches of the industry and a most comprehensive program of First Aid work is being worked up.

Another feature that will attract a great deal of attention is the exhibition of new inventions and patents. The displays here are of interest to oil men, manufacturers and inventors since they show the trend of equipment design and offer the opportunity to manufacturers to aid in the development of sound ideas. The oil industry is becoming more scientific and more efficient. Equipment for actual field application, however, must be practical; a display of new inventions, therefore, furthers the combination of technical and practical principles.

Attendance at the show will be confined mainly to those connected with the industry. Free complimentary tickets will be provided for oil men so that they can attend the exposition as often as desired. All exhibitors are provided with a necessary supply of such tickets which is in addition to those furnished to the various oil companies.

According to Lenzner, the interest shown in the past contests held in connection with the Oil Show has warranted provision for additional prizes during the 1936 Exposition. Keen rivalry has been displayed in the First Aid Contests and the competing teams are planning on more intensive work than ever before. These contests have resulted in greater efficiency in safety work and much of the hazard connected with field and plant operations in the Gulf Coast and other Texas areas has been eliminated. The prizes awarded the winning teams are cherished; and some of the First Aid Teams have already started special training for the contests.

Many of the exhibitors have also indicated that more attention will be given to the appearance of their displays. Prizes are to be awarded for the best exhibits with due consideration being taken of the effectiveness of presentation as well as of beauty. Many will have moving exhibits to show the operations of their products under actual working conditions.

Other prizes will be offered for demonstration work and for other features during the week of the show. Of striking interest among the demonstration features will be the fighting of fires, both in oil fields and in refineries.

The Houston hotels are cooperating with the Oil Equipment and Engineering Exposition by making reservations for rooms without raising the rates.

Refinery Exhibit Feature At Tulsa Exposition

An exhibit showing how refining progress as well as conservation of natural resources programs is saving the petroleum in the Unites States will be a feature at the ninth International Petroleum Exposition at Tulsa, May 16 to 23, according to W. A. Schlueter, chairman of the scientific and technical committee.

"The volume of refined products is now within one percent of the volume of a barrel of crude oil in refineries using modern equipment," he said. The exhibit will show as near as possible working models of the new refining units developed in the past 15 years which have contributed to this progress.

"Scientific exhibits for the ninth exposition will be more carefully worked out than heretofore and will show many new features of the oil industry which are little known to the average oil man."

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PHILADELPHIA - TULSA - HOUSTON - LONG BEACH

Alloy Steels

Republic Steel Corporation, Youngstown, Ohio, has issued a new and comprehensive 106-page book that presents a wealth of up-to-date chemical and metallurgical data on standard and special steels. It is well illustrated.

Steel Sheaves

Allis-Chalmers Manufacturing Company, Milwaukee, has issued a revised 16-page bulletin, No. 2188A, to include its complete, recently extended line of Duro Brace Texsteel sheaves for stock drives up to 15 horsepower.

Turbine Pumps

Worthington Pump and Machinery Corporation, Harrison, N. J., has issued an attractive and informative broadside covering its vertical turbine type pumps for deep well and general service. The bulletin, No. W-450-B27, will be mailed to interested persons upon request.

Squeaks from the Bull Wheel

Eligible

A woman reporter on the Tyler Courier-Times-Telegraph, giving the East Texas girls some hints on the possibilities presented them by Leap year, has this to say:

"W. F. Nenny (privately known as the 'Black Gold Appollo') is one of the best known oil men in these parts. His genial, refreshing personality and his gay good humor have made him an idol of many feminine hearts. He is one of the oil men who 'lets himself be known about town' . . . because he likes people and they like him."

Easy

Guest (to host in new home): Hello, old pal, how do you find it here?

Host: Walk right upstairs, and then two doors to the left.

Fair Warning

"The highway has signs all along warning the petters."

"What do the signs say?"

"Beware of soft shoulders."

We're Like That

Wag: "Next to a beautiful girl, what is the most interesting thing in the world?"

Nag: "When I'm next to a beautiful girl I'm not thinking about statistics."

Turned Down

Mike: "'Tis a fine lad ye have here. A magnificent head and noble features. Could you lend me a couple of dollars?"

Pat: "I could not. 'Tis me wife's child by her first husband."

Courtly

In a kindergarten class the teacher was having them play king and queen, court bowing, etc. Little Isadore had been chosen as king and was quietly sitting by the little girl queen.

"Isadore," said the teacher, "you should talk to the queen and not just sit there."

Whereupon Isadore turned to the queen and said: "Good morning, queen, how's business?"

The Big Winner

Two men were discussing prayer. Said one: "I'll bet a dollar you can't repeat the Lord's prayer."

The other took him up and started out with "Now I lay me down to sleep—"

Said the challenger: "Here's your money. I didn't think you knew it."

Short and Snappy

She: "I'm Suzette, Oriental dancer."

He: "Shake!"

Don't Upset the Balance

Bookkeeper: "Well, Boss, we are out of the red for the first time in many months, but have no black ink."

Manager: "Great! Buy a bottle of black ink."

Bookkeeper: "Can't do that as it will put us in the red; we made only eight cents."

Backward Child

"How old are you, my little man?"

"Darned if I know, mister. Mother was twenty-six when I was born but now she's only twenty-four."

Dropping Letters

Married Daughter—I do wish you'd learn not to drop your aspirates, father. You never hear Claude doing it.

Self-Made Man—Pity 'e isn't as careful with 'is vowels. 'E's got I.O.U.s lying about all over the place.

Asking Too Much

A lady stopped at the clock counter. "I want an alarm clock, please," she said. "One that will rouse the maid without waking the whole family."

"Sorry, madam," replied the salesman. "I'm afraid we only have the ordinary kind, which rouses the whole family without waking the maid."

Coins

"Here, Aunt," said the returned traveler, "is a franc I brought you from Paris as a souvenir."

"Thank you," said the dear lady. "I wish you would have brought me one of the Latin quarters I read so much about."

Some Twister

A city visitor from Kansas gazed at the spiral fire escape that wound its way down the rear of a very tall building.

"Gosh," he exclaimed, "that must have been a danged long ladder before the cyclone hit it."

Seasick?

Steward: "How would you like your breakfast, sir?"

Passenger: "With an anchor on it!"

Too Much Concentration

"Who was that fat lady I saw you with the other night?"

"That was no fat lady. That was me girl friend! You see, I and me frail were dancing in this dump when suddenly she passes out. So I hollers, 'Air! Air! Give her air!' So what happened! Some bloke from a service station comes running up and slips her thirty pounds."

Supply Limited

She was a smart little thing of three summers and her mother was entertaining callers one afternoon. The youngster appeared on the scene with a goblet filled with water which she gave to one of the guests. The guest took it and remarked about what a smart little daughter the hostess had. The child left the room two more times and reappeared with the goblet filled, which the guests in turn drank. At last the child came back with the goblet empty. "I tan't dit no more water; I tan't reach the string," she said.

OIL COMPANY OFFICE and FIELD FORMS

. . . available at mass production prices

After carefully reviewing the forms of a number of oil companies, The Gulf Publishing Company has made up six standard forms listed below and has produced these in such quantities as to enable oil companies to secure them at substantial savings.

These forms are printed on 16 lb. Bond Paper. They are substantially bound. Duplicates are printed on colored bond and perforated, pencil carbon included with each book.

Forms will be shipped prepaid at prices shown below. Samples will be sent upon request.

Number	Kind of Form	PRICE 1 Book	5 Books	10 Books
Form 100	DAILY DRILLING REPORT—1 TOUR (In duplicate—100 sets to the book).....	$1.50	$6.50	$10.50
Form 101	DAILY TIME RECORD (In duplicate—100 sets to the book).....	1.40	6.00	9.50
Form 102	DAILY GAUGE REPORT (In duplicate—100 sets to the book).....	1.40	6.00	9.50
Form 103	WELL LOG AND RELATED DATA (8½x11, Printed both sides—100 to book)	1.50	6.50	10.50
Form 104	PIPE TALLY SHEET (In duplicate—100 sets to the book).....	1.50	6.50	10.50
Form 105	MATERIAL TRANSFER RECORD (In duplicate—100 sets to the book).....	1.50	6.50	10.50
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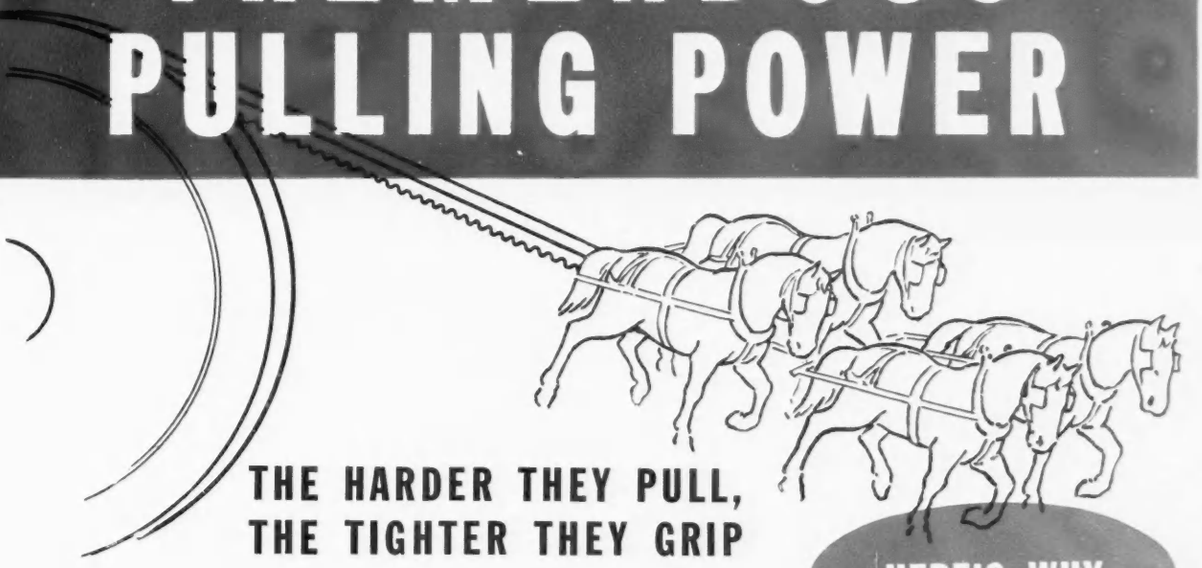

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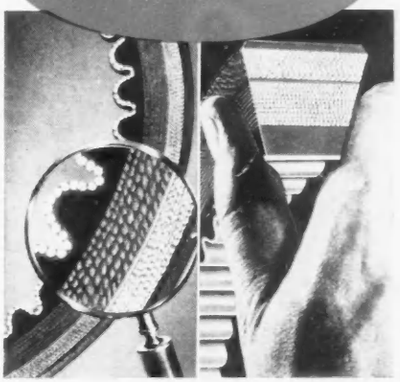

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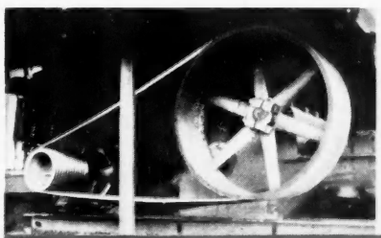

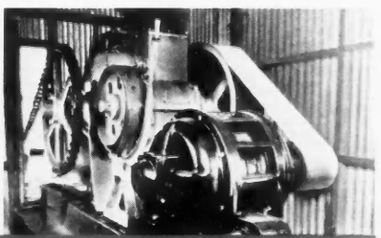

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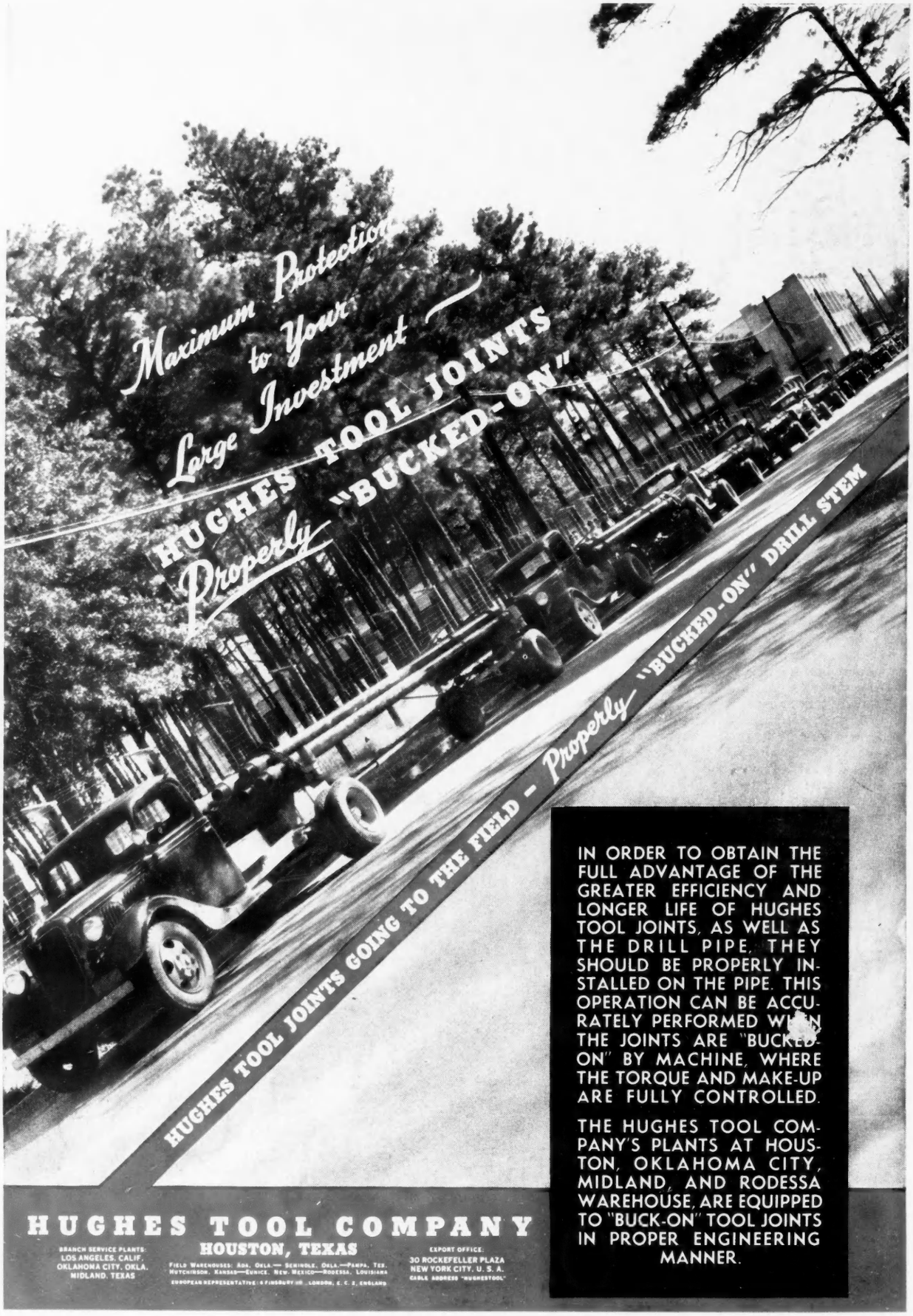

IN ORDER TO OBTAIN THE FULL ADVANTAGE OF THE GREATER EFFICIENCY AND LONGER LIFE OF HUGHES TOOL JOINTS, AS WELL AS THE DRILL PIPE, THEY SHOULD BE PROPERLY INSTALLED ON THE PIPE. THIS OPERATION CAN BE ACCURATELY PERFORMED WHEN THE JOINTS ARE "BUCKED-ON" BY MACHINE, WHERE THE TORQUE AND MAKE-UP ARE FULLY CONTROLLED.

THE HUGHES TOOL COMPANY'S PLANTS AT HOUSTON, OKLAHOMA CITY, MIDLAND, AND RODESSA WAREHOUSE, ARE EQUIPPED TO "BUCK-ON" TOOL JOINTS IN PROPER ENGINEERING MANNER.

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